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INSIDE DOPE

by GEORGE F. TAUBENECK

Stories of the Week
Introducing a New Book: 'ONE FOOT IN THE DOOR'
Unbecoming Immodesty
How to Make More Money
From Byrd to Wurm: A Gnu
Good Deed Backfires
One of Our Boys
Selling In Reverse

Stories of the Week

Princess Elizabeth of England, who recently became 21, has been much in the headlines lately. And that has reminded people of a good story about her childhood.

As a moppet, "Lilybet" was quite proud of the fact that she was a princess. One day she and her grandmother, the austere "Queen Mother Mary," were shopping. The clerk beamed at Elizabeth and inquired:

"How are you today, little lady?"

Elizabeth stiffened.

"I'm not a lady. I'm a princess," she returned, haughtily.

"No, she isn't a lady," added Queen Mary, "but we hope she will be one some day."

Our favorite paragrapher, Harry Wade, dropped this one into the hat the other day.

"You never can tell till you try!" said an ingenious small boy, as he pushed the pup into the Bendix.

At regular intervals foreign correspondents write books and articles about "Getting along with Russia."

Thesis of all these books is that the Russian people are O.K., but their rulers are incorrigible. If only the Russian people could see how well we Americans live, they'd spurn their leaders, and they'd cooperate with us in the United Nations. Then peace-on-earth would obtain forever. That's probably true. Here's an illustrative story:

After returning to his home town on the banks of the Volga, a Russian sailor who had spent many weeks on America's West Coast held the villagers spellbound with his tales of life in the fabulous United States.

"They have everything!" he exulted. "Bathtubs, refrigerators, radios, plenty to eat, more clothes than they need. Why, in America, you eat like a king—for free! You ride around in a gorgeous automobile or airplane—for free. You live in a beautiful home, with pets and television—for free! You go to night clubs, the movies, and the concerts —wearing sables and diamonds . . .

"Just a minute, Tovarisch," interrupted a neighbor, "did *you* enjoy all this luxury?"

"No, but my sister did."

Introducing a New Book: 'ONE FOOT IN THE DOOR'

It's an odd fact that few Americans have bothered to find out what *really* makes our unique Abundance-for-All System tick. Tons of volumes have been published about our mass production, our inventions, and our material resources. Yet none of these discoveries in themselves are responsible for our unparalleled standard of living—alone or in combination.

Unsung merchandisers have made us what we are today. They have persuaded people that they *needed* things they didn't even know they *wanted*. In so doing, they have insured the progress of America's upward spiral of better living.

How do merchandisers—a species of genius peculiar to America—influence us to lift ourselves by our

(Concluded on Page 8, Column 1)

Wilson Cabinet Drops Prices on Several Commercial Items

SMYRNA, Del. — Price reductions in the refrigeration industry continued as Wilson Cabinet Co., Inc., here announced "healthy" price decreases on farm milk coolers, home and farm freezers, and the complete line of commercial walk-in equipment.

Retail prices of the milk coolers have been lowered from $13.50 to $32. Reductions range from $26.75 to $58 on four of the company's most popular farm freezer models.

"We hope that similar action will be taken by other manufacturers and businesses," John E. Wilson, Jr., president, stated, "as we feel this is the only way to restore public confidence in the ability of American business to produce and sell to the consumer good products at fair prices."

"We have taken this action in spite of the fact that materials and component parts used in the manufacture of our products not only have not been reduced, but in some cases still continue to show an upward trend," Mr. Wilson pointed out.

"For example, one component part used on milk coolers for which we paid $9.56 in October, 1945, has been increased six times since that date, and now costs $15.34, an increase of more than 60% in 18 months. I cannot believe that our economy can stand increases of this kind, and I am sure the consumer will not stand them long."

He said Wilson will operate on a smaller profit margin and strive for greater manufacturing efficiency to justify the reductions.

Hotpoint Names Taylor Merchandising Manager

CHICAGO—Edward R. Taylor has been appointed merchandising manager, Hotpoint Inc., L. C. Truesdell, vice president in charge of marketing, has announced. Mr. Taylor comes to Hotpoint from Zenith Radio Co.

In his newly created position, Mr. Taylor will direct all of the company's advertising, sales promotion, sales planning, sales training, and kitchen planning activities.

Before joining Zenith, Mr. Taylor had been associated with automotive advertising and merchandising for General Motors since 1924.

Dept. Store Feb. Appliance Sales Rise 192% over '46

WASHINGTON, D. C.—Value of department store sales of major household appliances during February was 192% above that for the same period of 1946 but month-end stocks were 452% higher in value, the Federal Reserve Board reported.

The board found the value of sales during the first two months of this year 211% more than for the corresponding period of 1946. Ratio of stocks to sales for February was reported as 1.6, as compared with 0.8 for the same month last year.

February sales of home furnishings by department stores were said to have risen 16% over the February, 1946, level while sales for the first two months were 24% ahead of those last year during the same time. Stocks in the stores at the end of February showed an 86% increase.

February's ratio of stocks to sales was 4.2, compared with 2.6 for the same month last year.

Overall department store sales for the four-week period ending April 26 were reported by the board as 4% above those for the same period of 1946. For the week ended April 26, sales were 14% higher than for last year's corresponding period.

Jahco Doubles Open-Type Unit Output In 2 Mos.

CLEVELAND—Within two months after the first open-type refrigeration condensing unit rolled off the assembly line, Jack & Heintz Precision Industries, Inc., has more than doubled its initial production and is rapidly approaching the 5,000-unit figure originally scheduled to be attained in the closing months of 1947, company officials declared last week.

Refrigeration unit output, now at the 3,750 level, is expected to reach 5,000 next month and by August should hit 6,000, the management believes.

The Jahco sales program is placing the units in the hands of refrigeration equipment wholesalers in key cities, where they will be available for direct sales to servicemen, local fixture companies, and others.

Sales of all Jack & Heintz products in April totaled $2,297,195, and final figures are expected to show a profit for the month, Byron C. Foy, chairman of the board, told stockholders at the annual meeting.

A profit in April will be in contrast to a first quarter operating loss of $318,830 on total sales of $3,716,581 for the period, he said.

The company's backlog of orders for its products amounts to about $58 million, it was said.

Quick-Frozen Meat Vendors Seen Aiding Industry Progress

CHICAGO — Producers of quick-frozen meat are confident that the sale of quick-frozen cuts under the self-service plan will work "as much of a revolution in the meat industry as did the introduction of Western dressed beef through the refrigerated car years ago," according to statements made recently by Charles E. Wurm, president of the Quick Frozen Food Association of Chicago.

Price reductions at the retail level are likely, Mr. Wurm said, through the expansion of sales in self-service vending equipment. He cited savings in labor and time as a result of the purchase of ready-packed frozen meats, lower freight charges, and the ability to concentrate on fast-selling cuts and a reduction in stocks of slow-moving items.

Industry claims for frozen meat, Mr. Wurm pointed out, include "lessened bacterial count and increased tenderness." Storage of frozen cuts for one week at a temperature of 0° F. increases tenderness about 20%, he said.

Another advantage is that a greater variety of choice meats can be stocked in key warehouses.

Kansas State Begins Locker Course June 9

MANHATTAN, Kan.—Dean William F. Pickett of the Kansas State College of Agriculture here, has announced that that school will present another locker short course beginning Monday, June 9, 1947.

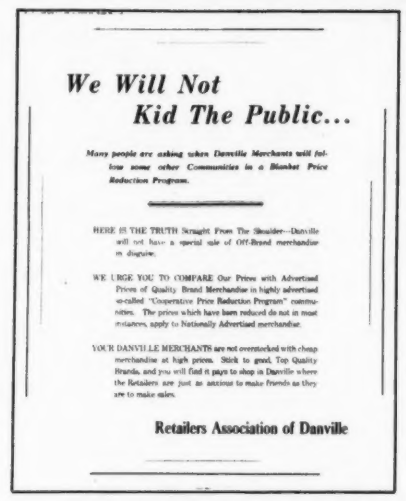
The previous 12 week course has been condensed to five weeks with fulltime classes running weekly from Monday through Friday. Visits to nearby locker plants have been tentatively scheduled for weekends.

The school will be presented in cooperation with the Frozen Food Locker Institute, and various speakers from the industry itself will address evening sessions of the various classes.

The course will cover all phases of locker plant operation including

(Concluded on Page 4, Column 4)

Supported by Newburyport, Price Cut Plan Hits Snags Elsewhere



We Will Not Kid The Public...

Many people are asking when Danville Merchants will follow some other Communities in a Blanket Price Reduction Program.

HERE IS THE TRUTH Straight From The Shoulder—Danville will not have a special sale of Off-Brand merchandise in disguise.

WE URGE YOU TO COMPARE Our Prices with Advertised Prices of Quality Brand Merchandise in highly advertised so-called "Cooperative Price Reduction Program" communities. The prices which have been reduced do not in most instances, apply to Nationally Advertised merchandise.

YOUR DANVILLE MERCHANTS are not overstocked with cheap merchandise at high prices. Stick to good, Top Quality Brands, and you will find it pays to shop in Danville where the Retailers are just as anxious to make Friends as they are to make sales.

Retailers Association of Danville

Through this full page advertisement in the *Danville Morning News* (Pa.) retailers informed the public that there would be no "across-the-board" price cut because "merchants are not overstocked with cheap merchandise at high prices" and won't push "a special sale of off-brand merchandise in disguise."

Radio Prices Won't Drop In Next Year, Union Head Warns

CHICAGO — "Radio prices can't come down to any degree in the near future or even within the next year," M. F. Darling, president of Local B-1031 of the International Brotherhood of Electrical Workers (AFL) declared last week in a report to union membership.

"Material prices have gone up because of shortages in everything from wood to copper," he explained. "Also wage rates have gone up in keeping with the rising cost of living."

He indicated that he was surprised that radio manufacturers have not made this clear to the general public who, he said, has been led to believe that industrial prices will come down.

Believing that the radio market is far from saturated, Mr. Darling estimated that a total market demand for about 27,000,000 radio receivers has been built up since 1942. On the other hand, he declared, only 19,230,000 sets have been manufactured since V-J Day.

Mr. Darling opined that the emergence of frequency modulation and television should increase demand.

Admitting that there were layoffs in the radio industry because of prices, Mr. Darling noted that "more expensive radios are not moving too well."

Westinghouse Ships 1,000 Carloads of Appliances

NEW YORK CITY—The Westinghouse electric appliance division produced and shipped 1,000 carloads of household appliances during April, and in the year and a half since the war, has produced 1,899,857 appliances exclusive of radios, it was reported by John H. Ashbaugh, vice president in charge of the division, at a meeting here.

"In the first four months of this year, we have produced more merchandise and done a greater volume of business than in any like period in our history," said Mr. Ashbaugh. "As a matter of fact, there have been only two years in our history in which business in a full year has exceeded these four months.

"We have no plans at the moment to increase our prices. We are going to do everything humanly possible to hold them to the very minimum. We recognize that this will be quite an assignment with increased costs."

NRDGA, NAM Groups Claim Flat Price Reduction Is 'Economically Unsound'

DETROIT—Though merchants of Newburyport, Mass., voted to continue indefinitely their plan for a 10% "across the board" reduction in retail prices, sponsors of similar plans elsewhere were apparently not doing very well last week.

Unable to force manufacturers and wholesalers to reduce their prices, as the plans intended to do, these retailers were finding that they had to pay more at wholesale for low margin goods than they were selling such goods for at the reduced retail prices.

This "lack of cooperation" by suppliers brought to an abrupt end the "Jackson Heights Plan" in Queens, N. Y. after it ran only three days, despite the fact that the merchants are said to have averaged 200% more business during those three days than in any similar period.

Some manufacturers, in answer to a questionnaire circulated by the National Association of Manufacturers, declared that they were not reducing their prices because of uncertainty of material costs, the possibility of future wage demands, and alleged low labor efficiency.

Besides meeting this resistance, the flat price reduction plans were scored as "unsound" and "unfair" by other retailers.

Lew Hahn, president of the National Retail Dry Goods Association, asserted here last week that "any plan calling for a flat horizontal reduction in prices can be nothing more than a special sale for a limited time.

"It could not be maintained unless, and until, manufacturers are willing to make a reduction in prices to the retailer.

"You cannot make a reduction of 10% on sales when your profit has been only 3½%," he declared, pointing out that net profit on sales of department and specialty stores in 1945 was only 3½%.

"Retail stocks are not well balanced," he said. "Some items are now plentiful and some are still scarce. Given the opportunity to purchase at reduced prices, the public would go for the scarce items first.

"Then the retailers would go back into the market where the scarce items are still scarce, and the enlarged demand would push prices higher than ever. Thus the attempt to defeat inflation actually would be inflationary."

Merchants in Danville, Pa., took a dim view of the Newburyport Plan. They declared, in a full page advertisement appearing in the local paper that "Danville will not have a special sale of off brand merchandise in disguise.

"We urge you to compare our prices with advertised prices of quality brand merchandise in highly advertised so-called 'Cooperative Price Reduction Program' communities," the advertisement read.

"The prices which have been reduced do not in most instances apply to nationally advertised merchandise," it continued.

"Your Danville merchants are not overstocked with cheap merchandise at high prices. Stick to good, top quality brands, and you will find it pays to shop in Danville where the retailers are just as anxious to make friends as they are to make sales."

A columnist on the *Danville Morning News* commented that Danville adheres to the view that the Newburyport plan is "a noble gesture replete with pitfalls both for the customer and the merchant."

He cited refrigerators as an example of national brand merchandise sold under nationally set prices

(Concluded on Page 4, Column 4)

Refrigeration Research Wins Award For a Clayton & Lambert Man

LOUISVILLE, Ky.—Research developments in gas-fired absorption refrigeration have won for Walter L. Edel, formerly dean of the School of Engineering at the University of Connecticut, his promotion to vice president of the Clayton & Lambert Mfg. Co., Louisville, Ky., and Middletown, Ohio, in charge of engineering and research, it was announced last week by Charles F. Lambert, president.

Walter L. Edel

Mr. Edel joined Clayton & Lambert, 57-year-old manufacturer of blow torches and fire pots, gas and electric water heaters, prefabricated farm structures, pipe and furnace fittings, and builders' hardware, in 1943 after such early wartime assignments as engineer in charge of construction (1942-43) of the Pratt & Whitney Aircraft Corp. engine plant at Kansas City, Mo., and munitions procurement officer (1941-42) for the British Purchasing Commission.

Prior to becoming engineering dean and professor of mechanical engineering at the University of Connecticut, Mr. Edel was engaged, successively, in refrigeration engineering activities for the Davison Chemical Co., the Winchester Repeating Arms Co., and Frigidaire Corp.

Mr. Edel graduated from Johns Hopkins university in 1920 as a mechanical engineer. In 1939, he received an M. S. degree in engineering from the Massachusetts Institute of Technology.

Want To Contact Old Customers? Be a Pay Station

PORTLAND, Mich. — One of the most valuable promotional assets to an electrical appliance dealership is a pay station for an electrical utility, according to Harold Swarthout, head of Swarthout's, appliance dealership here.

Swarthout made a strong bid to obtain an authorized pay station for the local gas and electric utility company, several years ago. Since then, he can trace as many as 50 sales per year of refrigerators, ranges, or washing machines directly from this source.

"For one thing, we get the first crack at the new home owner moving into the area," Mr. Swarthout said. "They usually come to us to order the gas and electricity turned on. This gives us an opportunity to show our appliance lines, welcome the customer to the community, and to answer any questions they may have about rates, etc."

Swarthout doesn't believe that there is any other addition to the store which guarantees that the appliance dealer will see his customers at least once a month. Ninety per cent of his account-paying customers come in the first of the month.

Automatic Products Co. Sells $500,000 of 3½% Notes

MILWAUKEE — Automatic Products Co. of Milwaukee, manufacturer of refrigeration, heating, and other controls, has sold $500,000 of 3½% Notes maturing serially to and including April 1, 1957, and $400,000 of 4½% Cumulative Preferred stock.

The proceeds will be used to retire $600,000 of 3¾% Notes, with the remaining going into working capital.

Contractors Reveal In Which Part of Field They Operate

CLEVELAND — A $160,000,000 gross annual volume of business is indicated for members of the National Association of Refrigeration Contractors, based upon a representative sample of its membership, covering members in the largest as well as the smallest cities, and firms with an annual volume ranging from nearly two million dollars down to five thousand, officials of the NARC have reported.

This volume comprises sale of equipment, installation jobs, and maintenance and repairs. The latter makes up about 15% of the total, and the other two classifications are about equal.

The kind of business done by the firms reporting is shown by the following figures, which also indicate the diversified nature of the business and the extent to which equipment is sold in the four classifications.

	Install and Service	Sell Equipment
Commercial Refrigeration	93%	95%
Industrial Refrigeration	74%	72%
Domestic Refrigeration	47%	35%
Air Conditioning	75%	71%

The ratio of total overhead and operating expenses to gross dollar sales volume ranged generally between 20% and 30% with the average being about 25%.

A total employment of 6,930 skilled mechanics for NARC members is indicated by the data returned.

Thirty-one per cent of the firms employ union men.

The survey also brought in figures on wage rates for mechanics and the pricing of labor work on jobs, but NARC directors felt that this information should be restricted to the association members, for the time being.

This survey was NARC's initial effort to get some statistical information about the business, that could be used as a guide or measuring stick for members to size up their own operations with others.

Proctor Amplifies Fair Trade Policy

PHILADELPHIA—Reiterating its merchandising policy with regard to the fair trading of Proctor appliances at both the retail and the wholesale level, the Proctor Electric Co. has emphasized and amplified its Fair Trade notice to its distributors and retailers in a new price sheet in which a new product, the Proctor "Roast-Or-Grille," is announced.

The notice reads as follows: "Resale prices on these goods are fixed by agreement under applicable Fair Trade Acts, and hence such resale prices must be observed by law. . . . Under our Fair Trade Policy, shopworn or damaged merchandise may not be sold at less than the fair trade retail price unless (a) it has first been offered to the Proctor Electric Co. for purchase at the price paid for the merchandise by the retailer, and (b) unless it is offered and sold to the public as such shopworn or damaged merchandise."

Prices of regular Proctor products remain the same in the new price sheet—Model No. 975 Champion iron, $10.95; model No. 961 Never-Lift iron, $13.95; model No. 1466 Color-Guard toaster, $18.95. The new roaster is listed at $39.95 including federal excise tax.

Cohen Heads Philco N. Y. Distributors

NEW YORK CITY—Appointment of Joseph Cohen, a veteran of radio and appliance distribution who has been with Philco for 11 years, to the position of general manager of the New York branch of Philco Distributors, Inc., has been announced by Hal Sheer, vice president and general manager of Philco Distributors.

Mr. Cohen joined the Philadelphia branch of Philco Distributors, Inc. in 1936 as a salesman after several years of experience in the electrical appliance field. Two years later he was promoted to sales manager of that branch. Since October, 1945 he has been sales manager of the New York branch.

Jones Is Appointed Bendix Chief Engineer

JOHN PAUL JONES

* * *

SOUTH BEND, Ind.—John Paul Jones of Marion, Ohio, has been appointed chief engineer at Bendix Home Appliances, Inc., South Bend, Ind., according to W. F. Oliver, vice president and director of engineering, who had held the post in connection with his administrative duties since the war.

Mr. Jones joins Bendix Home Appliances, Inc., after more than six years with various subsidiaries of the International Detrola Corp.

After serving as a machinist three years in Danville, Ill., and four years for the International Machine Tool Co., Indianapolis, he affiliated with the International Machine Tool Corp. at Indianapolis as a development engineer. He soon became chief engineer, and three years later, after the company had become the Libby division of International Detrola Corp., he was made production manager. In 1944 he served as a member of an operating committee which directed the operation of the Indianapolis plant.

When the Indianapolis plant closed after the war, Mr. Jones was transferred to the Universal Cooler Division of International Detrola Corp., at Marion. There he was chief production engineer.

100,000 Dishwashers In '48, Says Hotpoint

CHICAGO — Stepping up its production of automatic electric dishwashers to 100,000 a year by 1948, Hotpoint, Inc., appliance manufacturing affiliate of General Electric, is "betting several million dollars and 250,000 ft. of floor space in its multi-million dollar expansion program that the housewife wants to 'slide her dishes in from the side,'" company officials declare.

This greatly-expanded dishwasher production is part of the $20,000,000 expansion program announced by James J. Nance shortly after his election to the presidency of the company.

Mass production of the side-slide dishwasher and dishwasher sink will go ahead as soon as floor space is available in the company's present range factory on Chicago's west side, it is reported.

A new 12-acre building to house the range factory, under construction near the present site, is expected to be completed this year.

The new factory layout and assembly line are expected to effect an over-all economy of operation that will boost the production figures to four times its current rate, Mr. Nance said.

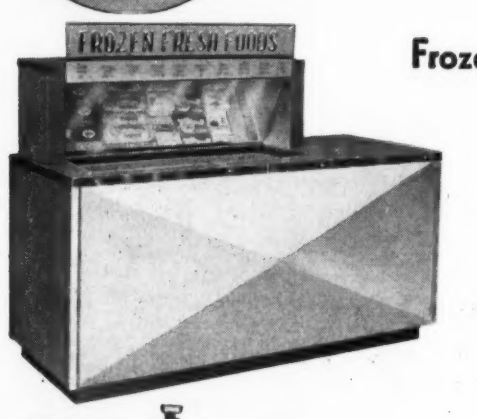
Sundberg Gets Post At G-E Boston Branch

BOSTON—Harry W. Sundberg has been appointed sales manager of the apartment house and builder division of the Boston branch of General Electric Appliances, Inc., it has been announced by C. M. Wilson, branch manager.

Mr. Sundberg started in the appliance business as a dealer in Lynn, Mass., was named wholesale manager of Lawton Engineering Corp., Boston, in 1936, and joined the General Electric Distributing Branch, in Boston, four years later, serving as district manager of heating and air conditioning.

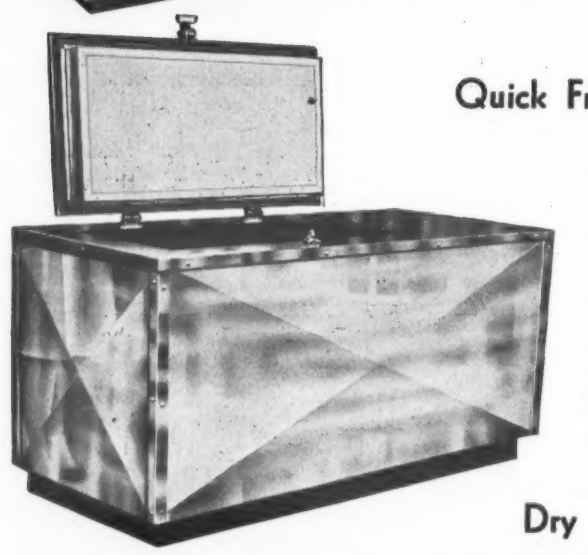
Following service during the war as a priorities specialist in the company's West Lynn Works, he transferred last year to General Electric Appliances, Inc.

MARVEL QUALITY LINE of Refrigeration



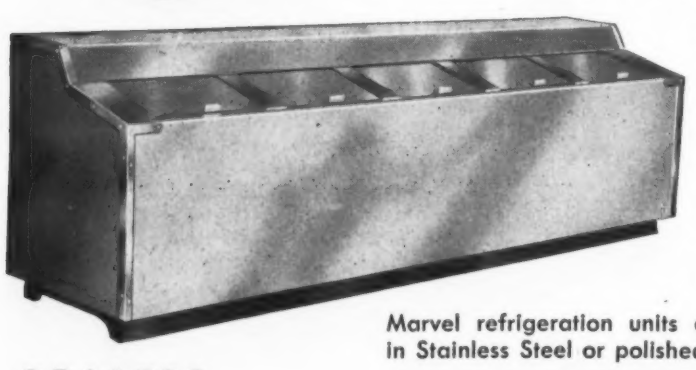
Frozen Foods Salesman

Shows them and sells them while maintaining proper temperature. Capacity 11.8 cu. ft. 5-in. Fiberglas insulation. Has heavy duty ¼ H.P. compressor. Main box is 6 ft. by 29½ in., 39 in. high.



Quick Freeze Locker

34 in. high, 72 in. long, 30 in. wide. 12 cu. ft. capacity. Large lid, 23x45. ¼ HP compressor. Range from 15° below zero to 3° above. 5 in. insulation.



Dry Beverage Cooler

39 in. high, 30 in. wide, 6, 8, or 10 ft. long. Lids slide away or lift out. Removable dividers. 8-in. utility shelf.

Marvel refrigeration units are finished in Stainless Steel or polished Aluminum.

DEALERS WANTED

Write, wire or phone today for information on franchise.

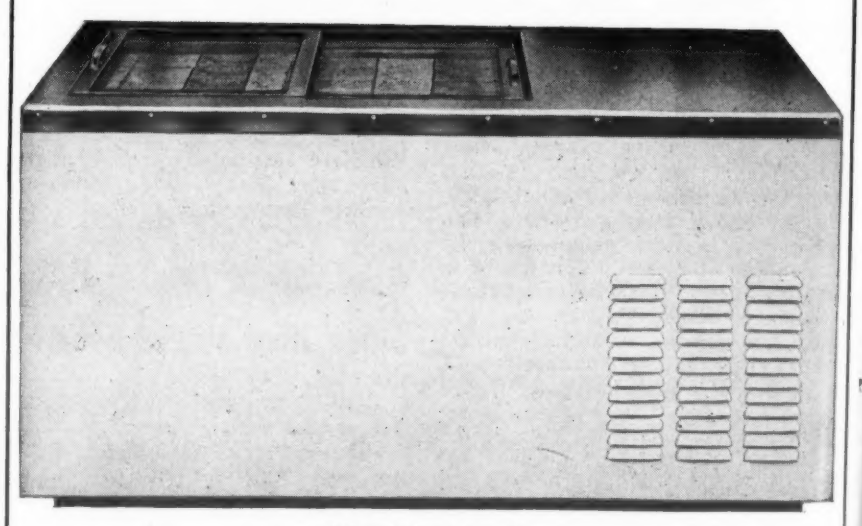
Immediate Delivery!

W. ALLEN ROGERS Industries

BOX 272-AC DEMOPOLIS, ALA.

Here it is!

The SENSATION of 1947



Model 510 A

Check these Features!

- 2 THERMOPANE SLIDING GLASS DOORS
- POLISHED STAINLESS STEEL TOP
- BUILT-IN 4 WALL REFRIGERATION
- ALL WELDED HEAVY GAUGE STEEL CONSTRUCTION
- HYDROLEENED FOR VAPOR SEAL

This 10 cubic foot all welded steel self service frozen food display cabinet is designed to meet the needs of the average store.

This self-contained, smartly styled, and superbly built cabinet eliminates the problems of:

Lack of space

Fear of overstocking

Fear of investing too much

FLEISCHMAN FREEZER CO., Inc.

275 East 140th St., Bronx 51, N. Y.

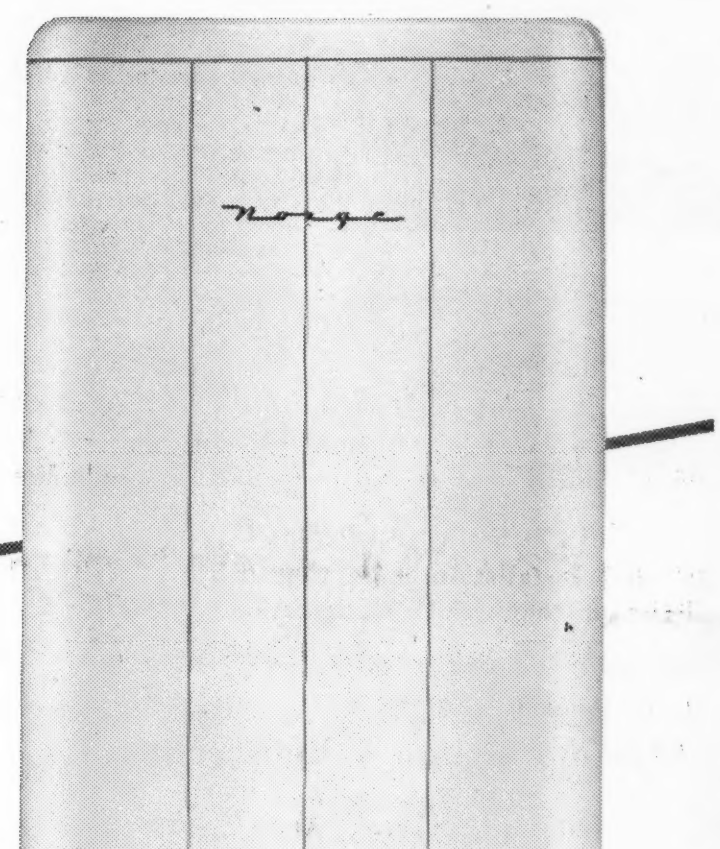
Products of
BORG-WARNER

ENGINEERING B-W PRODUCTION

AND NOW
SEVEN PASSKEYS TO PROFITS

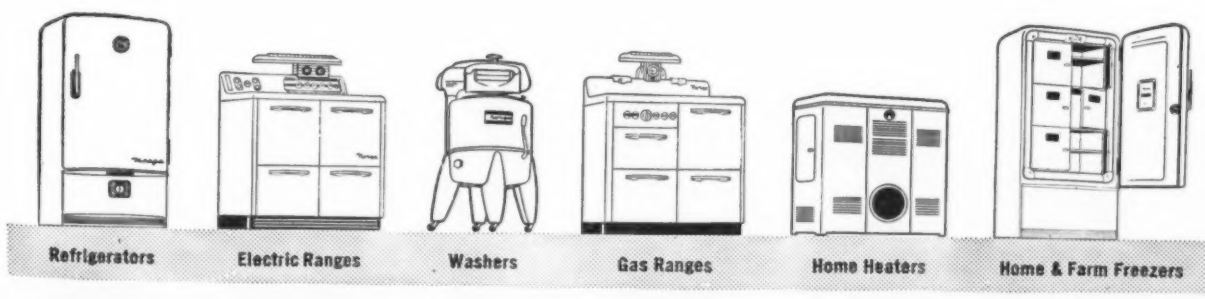
With the elevation of the Norge electric storage water heater to full status as a *major household appliance,* Norge now offers *seven* passkeys to profits. Seven lines, seven leaders . . . seven big-ticket items with which the Norge dealer can plan his future and build his fortune!

Two styles—a standard design, as illustrated, and a 36″ high "table top" design. Nine models, 5- to 82-gallon capacities.



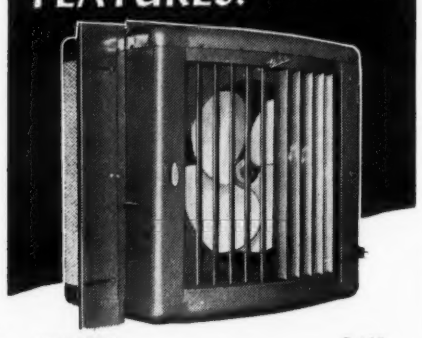
"The Best Dealer in Town Sells NORGE!"

Norge is the trade-mark of Norge Division, Borg-Warner Corporation, Detroit 26, Michigan In Canada: Addison Industries, Ltd., Toronto, Ont.



SEE NORGE BEFORE YOU BUY

COUNT ON
SNO-BREZE
EVAPORATIVE
COOLERS
FOR EXTRA
SALES-PULLING
FEATURES!



1500 CFM R-16D

Palmer desert-tested, time-proved coolers are backed by 38 years of air conditioning leadership. Write today for free catalog. There's a Palmer cooler for every need.

Palmer
Manufacturing Corp
Phoenix, Arizona

Westinghouse Renames Home Building Dept.

MANSFIELD, Ohio—T. J. Newcomb, sales manager of the Westinghouse Electric Appliance Division, has announced the formation of the Apartment House and Builder Sales Department to replace the former Home Building Department.

W. R. Arbuckle, former head of the Home Building Department, will be manager of the newly-created department, Mr. Newcomb said. Mr. Arbuckle, who has been with Westinghouse since 1935, will report to C. H. Guy, assistant sales manager.

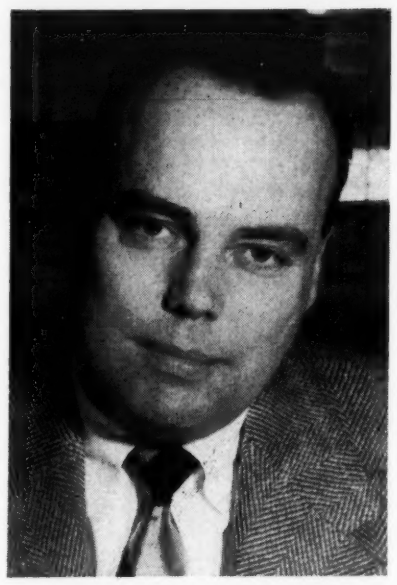
In the new department, Mr. Arbuckle will be responsible for coordinating with product department managers, the promotion and sale of appliances made by the division through the apartment house, builder, educational, and government channels. To coordinate and prepare for government business, K. W. Berkey, manager of the division's Washington, D. C., office, will report to Mr. Arbuckle.

Mr. Arbuckle was a commercial refrigeration supervisor for Westinghouse between 1935 and 1939, and from 1939 to 1941, he was supervisor of the Home Building Department of the Appliance Division in the eastern district, with headquarters in New York.

Firm Incorporates at $100,000

KANSAS CITY, Mo. — General Heating & Cooling Co., 1922 Grand Ave., Kansas City, has been incorporated with $100,000 authorized capital stock by Charles A. Haskings, C. W. Schumacher, and W. A. Tholen.

Merchandising Mgr.



EDWARD R. TAYLOR
He fills this newly-created post at Hotpoint Inc.

'Launderall' Distributors, Dealers Receive 90-Day 'Guarantee' Against Cut

DETROIT — A 90-day guarantee against price reductions on its "Launderall" washer was recently given distributors and dealers by F. L. Jacobs Co. here.

The action was announced to 5,400 dealers and 52 distributors in a letter signed by Edward A. Ash, director of Jacobs' appliance division.

"In case, during the period of 90 days from the date hereof, a price reduction of Launderalls is made effective by us," the letter said, "we will at the time of such reductions reimburse distributors and dealers on all units held by them in their stock on the effective date of the price reduction to the extent of the difference between the price paid by distributors and dealers . . . at the present prevailing price to (them) and the reduced price effective to (them) after such reduction."

Mr. Ash explained that the move was made because management is "sympathetic to the questions raised by our distributors and dealers who naturally do not want to take inventory shrinkages in the event of price reductions." He added that management is sensitive to demands for general price cuts.

Campaign on New Bendix Ironer Begins May 18

SOUTH BEND, Ind.—A national announcement of the Bendix automatic home ironer will be carried in major newspapers on three alternate Sundays starting May 18, according to Walter J. Daily, Bendix Home Appliances, Inc., director of advertising.

Advertisements will be full page, 1,700 line and 1,000 line. They are part of the cooperative advertising plan financed jointly by dealers, distributors, and the manufacturer.

Theme of the announcement series contends that the Bendix automatic ironer "takes the work out of ironing, just as the Bendix took the work out of washing."

Hewitt Manages Sales For Miracula, Gemco

ST. LOUIS — Jack York Hewitt has been named sales manager of both the Miracula and Gemco Air Conditioner Divisions of the General Engineering & Mfg. Co., of St. Louis, it has been announced by Willard R. Vogel, Gemco vice president and general manager. Mr. Hewitt formerly was sales manager of the air conditioner division only.

Mr. Vogel also announced the appointment of Frank D. Klein as assistant sales manager of the air conditioner division. Mr. Klein was previously production manager of the Murray Corp. plant in Detroit, and assistant factory manager of the Consolidated Vultee plant, Nashville.

Plans for the nation-wide Miracula distributor organization are well under way, Mr. Hewitt states. Production is scheduled to begin in September.

Price Cutting Plan--

(Concluded from Page 1, Column 5)

which would be adversely affected by a "Newburyport plan."

"All dealers," he said, "must sell certain lines of refrigerators at a standard price. A 10% reduction commitment automatically throws a dealer of one town into unfair competition of another town. This appears to have been overlooked by exponents of the Newburyport plan."

The Pennsylvania Retailers' Association was quoted by this columnist as stating that "retailers have an obligation to shake out speculative elements in suppliers' prices—item by item—as supplies strengthen, as they do every day. An alert merchant cannot and should not be pilloried as a result of unsound publicity tactics of those who have done nothing until hit by consumer resistance."

At Newburyport, Mass., however, local merchants were enthusiastic over the first 10 days campaign.

Noting a 30 to 45% boost in business during that period, they voted to continue the plan indefinitely.

They said that they had received promises of cooperation in reducing prices from 400 suppliers out of 8,000 queried and were hopeful of getting more. All of the cooperating suppliers apparently were in soft goods lines.

From Washington, the U. S. Department of Labor has reported that wholesale prices of 900 commodities fell 0.3% during the first week of the Newburyport plan.

Another gun in the war on high prices was fired by 23 prominent industrialists and business men last week who issued a statement through the National Planning Association calling on industry to show "economic statesmanship" in voluntarily lowering prices and saving the country from a serious slump.

The statement asserted, "If orderly price reductions do not become more general, business must share the blame for the slump that is then sure to come."

Among the signers of the above statement was Charles E. Wilson, president of General Electric Co.

Locker Course--

(Concluded from Page 1, Column 3)

the processing of meat, fruits, vegetables, and poultry; plant bookkeeping; refrigeration equipment and service; the preparation of frozen foods for cooking; bacteriology; and other important plant operations.

The class will be limited to 40 students. Fees for residents of Kansas will be $61.50 while nonresidents of Kansas will pay a fee of $71.50.

Since a considerable number of applications are already on file at Manhattan, the Frozen Food Locker Institute and officials of Kansas State College suggest that those desiring to attend the school write immediately to Prof. George A. Filinger, Kansas State College.

18 Yrs. Experience Backs Shop

SAN JOSE, Calif.—Grant Adams, a refrigeration service engineer with 18 years experience in the industry, has recently opened the "A-1 Refrigeration Service" shop here.

Takes New Post

H. M. JONES

* * *

Kerotest Names Jones Refrigeration Sales Head

PITTSBURGH—Howard M. Jones has been appointed sales manager of the refrigeration division at Kerotest Mfg. Co.

Mr. Jones comes to Kerotest from Universal Cooler Corp., where he served as administrative engineer. Previous to that he has been engaged in management, sales, and production activities as product manager of large Navy Ordnance contracts at Crosley Corp., export manager of Ranco, Inc., and assistant export manager of Nash-Kelvinator Corp., Detroit. Mr. Jones is an engineering graduate of University of Michigan.

WAA Holds Sale of Motors

CLEVELAND—A sale of surplus new and used electric motors ranging from 1/50th to 75 hp. is now being conducted by the War Assets Administration regional office here. The sale closes May 15.

WANT CUSTOMERS at 25¢ each?
Install "WARNER" thermometer "ON*SPOT" in Prospect's box

Advertise ON*SPOT business originates! Domestic model $25/100, 1/3 cash, Bal. C.O.D. ON*SPOT ADV., Box 86, Gulfport, Fla.

FOR SALE

2—NEW 5 TON CHRYSLER AIRTEMP PACKAGE ROOM COOLERS

1—NEW 3 TON CHRYSLER AIRTEMP PACKAGE ROOM COOLER

1000—1/25 HP SHADED POLE, TOTALLY ENCLOSED, FAN COOLED ROUND BODIED MOTORS

BOX 2352, AIR CONDITIONING & REFRIGERATION NEWS

WANTED!

Commercial Refrigeration Sales Engineer, capable of taking full responsibility of department. Must have proven background of ability and record of profitable production.

Also

Service and Installation man, thoroughly experienced in all phases of commercial refrigeration.

Address replies, giving complete information to:

Mr. J. E. Popwell
Alabama Fixture & Refrigeration Co.
2126 First Avenue North
Birmingham, Alabama

REACH-INS—23 to 56 cu. ft. Models with freezers, ice-makers, "Tu-Temps", or normal temperature.
SECTIONAL WALK-INS
FREEZE—STORE—DISPLAY
anything from a steak
to a steer in
JORDON
REFRIGERATORS
Sold—installed—serviced—warranted nationally by responsible dealers. Backed by a half century of experience.
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REACH-INS WITH FROZEN-FOOD LOCKER
BULK STORAGE FREEZERS
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BEVERAGE COOLERS
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AMERICA'S MODERN COMMERCIAL LINE
JORDON REFRIGERATOR CO.
Sales Division
235 N. BROAD STREET, PHILADELPHIA 7, PENNA.
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4 Retail Salesmen

Sell these two top lines under closed franchise to 200,000 people. Retail sales percentage gain highest in U. S.

W. C. BRADSHAW CO.
Distributor
Air Conditioning — Refrigeration
420 BROADWAY PHONE 44688 FRESNO, CALIF.

Custom-Made Walk-In Helps Supermarket Move Beverages, Dairy Items

VAN NUYS, Calif.—One of the largest refrigerators to be installed in a California supermarket is building sales for Serber's, huge open-face supermarket in this suburb of Los Angeles.

The walk-in box, in which are concentrated bottled soft drinks, beer, cheese, dairy products, wines and champagne, and in fact every grocery item which needs refrigeration, was custom-built to solve congestion problems for Serber's by City Refrigeration Co., Los Angeles.

The face of the refrigerator is done in highly polished natural blonde wood, to harmonize with general architecture of the supermarket in place of standard white porcelain. The exterior consists of ten 4 x 3 ft. doors, with double panes of glass, opening to 8 tiers of metal mesh shelving behind.

Interior dimensions of the walk-in refrigerator are 24 x 8 ft., with duplicate shelving on the rear wall from which "forward stock shelving" behind the refrigerator doors is stocked. Policy in the market is to build identical displays in the service wall of the refrigerator, and at the rear —so that restocking the huge box completely for rush evening shopping is a matter of only a few minutes.

Two blower-type coil units keep the room at a steady 40° F. temperature, sufficient for cooling most perishable products, according to the management of the market.

Three "zones" are used along the 10 doors, each zone containing precisely the same amounts of milk, cheese, cottage cheese, bottled drinks, lard, etc.

Thus, it is not necessary for a customer to walk from one end of the refrigerator doors to the other in order to pick out several items which she may need. At the same time, the large amount of stock space and the 10 doors make it possible to serve the largest crowds of shoppers without delay.

The convenience of the refrigerator has increased sales on everything from champagne to milk, according to the management, which is headed by Ben C. Ludwig. Serber's operates four stores in the Los Angeles and San Fernando Valley district.

Frozen Food Seminar Set for Boston Meeting

BOSTON—A frozen foods seminar and a talk on food transportation and storage by H. C. Diehl, technical director of Refrigeration Research Foundation, are included in the tentative program for the seventh annual meeting of the Institute of Food Technologists, Robert J. Gray, chairman of the publicity committee, has announced.

The meeting is scheduled to be held at the Hotel Statler here from June 1 to 4. Mr. Diehl will speak on the morning of June 3 and the frozen foods seminar will be held during the morning of June 4, according to the program.

Participating in the seminar sessions will be R. C. Poole of Birds Eye-Snider division, General Foods Corp.; Charles H. Harp, U. S. Army Quartermaster Corps; Alvin I. Nelson, New York Frozen Food Corp.; and Barbara Louise Hutchings and Walter Lord Obold, both of Drexel Institute of Technology.

Scheduled for consideration during the five day program are food technology and its relation to management, research and development administration, potential applications of colloidal chemistry and food processing, food transportation and storage, food processing and sanitation, seminars on frozen foods and fisheries technology, and submitted research papers.

Industry achievement and Nicholas Appert Medal awards will be presented.

Ben-Hur Products Reports 1946 Net Income of $150,441

MILWAUKEE—Ben-Hur Products, Inc. here has reported a net income of $150,441 or 28 cents per common share for 1946, contrasted with a net loss in 1945 of $1,719.

Net sales in 1946 were $7,431,319, against $5,964,907 in 1945.

2 Eastern Firms Elected To Membership In REWA

CINCINNATI — Refrigeration Equipment Wholesalers Association has elected two new firms to membership in the organization. The firms are Wanamaker & Redstone in Olean, N. Y. and Genesee Refrigeration Supplies, Inc. of Rochester, N. Y.

Leslie E. Wanamaker and Paul G. Redstone are partners in the first firm. Head of Genesee Refrigeration is A. W. Snyder, president.

Utica Theater Air Conditions

UTICA, N. Y.—The Olympic Theater will be air conditioned, according to George Smith, manager, by the Utica Oil Heating Corp.

With New Constitution, By-Laws, and Name, Arizona Contractors Assn. Begins Work On State-Wide Code

PHOENIX, Ariz.—The former Arizona Refrigeration Association has changed its name to Arizona Refrigeration Contractors Association, and has adopted a new constitution and by-laws, prepared and recommended by the National Association of Refrigeration Contractors, with which the Arizona association is affiliated.

Headquarters are in Phoenix, and the present membership comprises 25 refrigeration contractors of all sizes and both union and non-union.

Officers elected at the annual meeting are: president, G. W. Lance, Ace-Lance & O'Hara Refrigeration Co.; vice president, Burke Patterson, Climate Control Co.; secretary-treasurer, Kenneth Nash, Aircold Refrigeration Service; and sergeant-at-arms, Harlan Diehl, Commercial Refrigeration Service.

The directors comprise the officers and Roy L. Perry, Roy L. Perry Dairy Supply; E. McLaughlin, Arizona Engineering; Bill Houser, Karlson Machine Works; Frank Samuels, Frank Samuels Dist. Co.; and C. M. Tally, Tally Refrigeration Service.

The association covers the entire state of Arizona.

The association is now busily engaged in working on a state refrigeration code, which will include a licensing provision along with bonding, permits, and inspections.

Chicago Distributor Opens Large New Headquarters

CHICAGO—Haskris Co., refrigeration and air conditioning distributor here, has announced the opening of its new headquarters, comprising 20,000 sq. ft. of floor space.

In making the announcement Robert P. Christiansen pointed out that the modern building will house display, warehouse, and service facilities.

Buffalo Forge Sells $4,918,500

BUFFALO — Buffalo Forge Co. sales for the quarter ended Feb. 28 totaled $4,918,500, the company reported to the Securities & Exchange Commission.

Install these new PEERLESS Products for Superior Performance

TYPE "S" UNIT COOLER

● The new PEERLESS Unit Coolers are designed for easy mounting, require small space for the work they do. Type "R" is for walk-in and reach-in coolers, Type "S" for beverage coolers, bars, display cases and reach-in boxes.

NEW TYPE "R" UNIT COOLER

● Extreme adaptability and performance dependably superior at all times make PEERLESS products today's outstanding values in refrigeration. Non-ferrous construction, latest engineering improvements, and rigid standards in manufacture insure maintenance of required temperatures in your installations. PEERLESS products now available include Flash Plates, Flash Coolers, Unit Coolers, Ice Cube Makers, Fin Coils, Off Center Coils, Expansion Valves and Capacity Boosters. SPECIFY PEERLESS!

SOLD THROUGH LEADING REFRIGERATION SUPPLY WHOLESALERS

SNAP-OUT CUBE MAKER

NORMAL DUTY CUBE MAKER

HEAVY DUTY CUBE MAKER

● Fast Delivery on PEERLESS Fasterfreeze Cube Makers! Left to right are the Snap-Out and Normal Duty Cube Makers and the New Type Heavy Duty Finned Cube Maker with decorative front. Fast freezing is achieved by continuous refrigerant tubes in each shelf. A large range of sizes and tray types answers the need for any installation requiring ice cubes in quantity frequently. Write for specifications.

PEERLESS of AMERICA, Inc.

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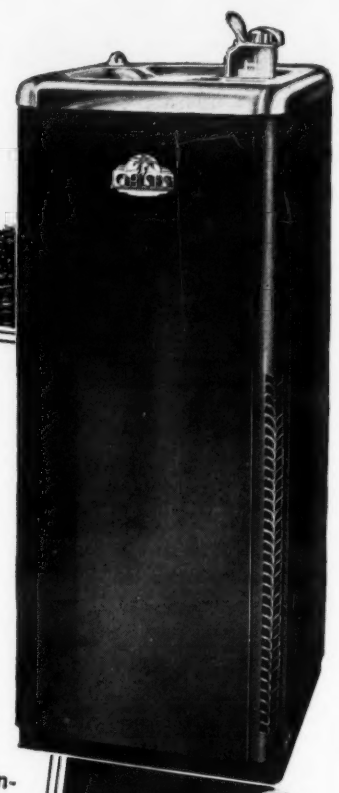
2901 LAWRENCE AVE. CHICAGO 25, ILLINOIS, U. S. A.

First in line at thirst time



Are you taking advantage of the extra thirst satisfaction built into OASIS Electric Water Coolers? Every OASIS feature reflects EBCO's 20 years of leadership in water cooler construction. Check the smooth, easy action of their dial-type bubbler controls . . . the durable beauty of their stainless steel tops . . . their handsome, corner-louvered cabinets . . . the new "lowside" engineering that boosts cooling efficiency. Capacities for every need. Pipe-connected (pressure) and bottle types. Bubblers or glass fillers as desired. Write for complete details.

OASIS
ELECTRIC WATER COOLERS

The EBCO MANUFACTURING CO.
401 W. TOWN ST., COLUMBUS 8, O.

Radiant Cooling?

Experiments Show It Doesn't Provide Comfort Conditions Where Temperatures and Humidity Are High, ASHVE Hears

NEW YORK CITY — An experimental study of physical, physiological and comfort aspects of "radiant" cooling was described by Prof. C. P. Yaglou of the Harvard School of Public Health at the April meeting of the New York Chapter of the American Society of Heating and Ventilating Engineers.

General conclusions reached in the study were that "radiant" cooling would be generally impractical in providing comfort conditions where high temperature or humidity conditions were likely to be encountered.

To Reduce Shock

The objective of the tests described by the speaker and conducted by him and Dr. Oscar Schneider some years ago, was to determine whether comfort could economically be maintained with high summer temperatures and humidities and without entrance and exit "shock." Tests were carried out in a small wall-cooled room, built inside a larger room which was conditioned by conventional methods.

Chilled water, in some cases near freezing, was circulated through coils embedded in three of the walls of the experimental room. The tests were run with dry bulb air temperatures between 75° F. and 95° F. and with relative humidities between 40 and 70%.

Subjects entered the wall-cooled cubicles from the outer "hot" room which had no cooled walls; they remained in the cool room for two or more hours and then returned to the hot room again. Skin and clothing surface temperatures were recorded at 23 points, and various other measurements were made.

Comfort Conditions for Men

With the air at 75° F., the mean wall temperature required to produce comfort in men wearing customary warm weather clothing, was about 75° F., Prof. Yaglou stated. As the air temperature was increased, the required mean radiant temperature ("wall" temperature) had to be lowered until at about 90° F. the mean radiant temperature was near 65° F.

The mean temperature of the cooled walls was then 40° F. and the temperature of the water circulating through the coils was about 35° F. With cubicle temperatures of about 89° F. for men and 92° F. for women, air temperature had no effect on comfort because the mean "clothing" surface temperature approached the air temperature.

For women, as compared with men, consistently higher (2 or 3°) wall and air temperatures produced comfort, partly owing to their lower metabolic rate and partly because of the considerably lower weight of clothes worn by the women, the speaker reported. For both men and women, regardless of air and wall temperatures, subjects were comfortable when their skin temperature averaged 93° F.

Skin Temperature Drop Less

The greatest asset of radiant cooling was a distinct alleviation of thermal shock on entering and leaving the cubicle. The sudden drop of mean skin temperature on entering the cubicle from the outer room kept at 95° F. and 40% relative humidity, was only 1.5° F., when the cubicle walls were cooled, as against 3.5° F. when the air was cooled to 80° F. and 50% relative humidity (walls also at 80° F.). After a two-hour exposure, the mean skin temperature approached 93° F. in both cases.

Under experimental conditions, the refrigeration load for radiant cooling was from 1.4 to 4.2 times greater than that needed when the cubicle was air cooled to 80° F. and 50% relative humidity, (walls and air at 80° F.) by the circulation of conditioned air. The higher the cubicle temperature and humidity, the higher was the load ratio.

This unusually high refrigeration load with "radiant" cooling was due to the large quantities of warm and humid air that had to be circulated through the cubicle in order to maintain a substantial wall-air differential for the purpose of the study. As a result there was much unnecessary cooling of air and condensation of moisture on cold walls, whose temperature had to be below the dew point temperature of the air to produce comfort with high summer temperatures and humidities.

Saturation Point Reached

Without circulation of air, the humidity soon rose to the saturation point, and there was a steep vertical temperature gradient, as high as 30° F. from floor to ceiling when the outer room was at 95° F. and the cooled walls at 39° F. Introduction of dehumidified air to reduce wall condensation was not attempted.

In the light of these experiments, it would seem that "radiant" cooling with great air-wall differentials is impractical, particularly when the humidity is high.

Wall cooling is also impractical in rooms occupied by many persons, owing to interference of body heat loss by radiation to the cold walls.

Rappoport Forms Own Concern In Cleveland

CLEVELAND — Herman Rappoport, for several years the sales manager for one of the largest store fixture companies in Ohio, has announced the formation of his own company, the State Commercial Equipment Co., through which he will act as manufacturers' agent dealing in commercial refrigeration and store fixtures for restaurant, hotel, and club equipment.

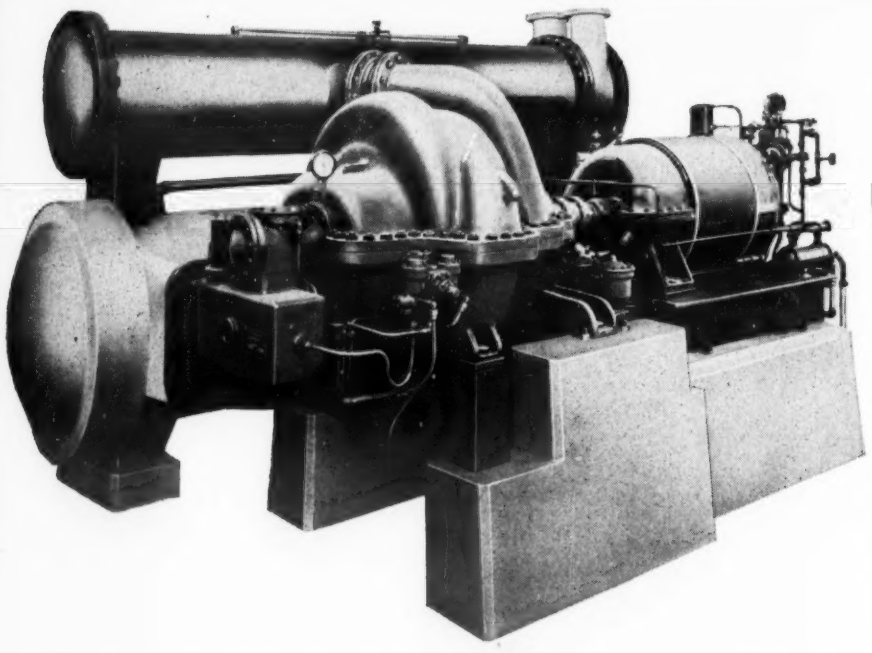
Mr. Rappoport, who has been in the commercial refrigeration and store fixture business for 15 years, further announced that his firm has been named by the Fleischman Freezer Co. as exclusive distributorship in Ohio, Indiana, Kentucky, and part of Pennsylvania.

The State Commercial Equipment Co. will also distribute the products of the Cleveland Refrigerator Co., National Cooler Corp., and the Irwin Cabinet Co., he said.

Address of the new business is 402 Swetland building, Cleveland.

WORTHINGTON
Air Conditioning and Refrigeration Report

Worthington Pump & Machinery Corporation, Harrison, New Jersey



WORTHINGTON OFFERS NEW, IMPROVED CENTRIFUGAL REFRIGERATION SYSTEMS

Recently improved designs now enable Worthington to offer Centrifugal Systems for use with most refrigerants, including the lighter hydrocarbons, and for any air conditioning or cooling process — chilling water, brine, chemicals, lubricating oils, etc. — at temperatures to meet any requirement. Now designed for temperatures as low as —160°F.

In the 450-TR Centrifugal Refrigeration Unit illustrated, for example, every one of the essential elements — 3-stage compressor, water cooled condenser, specially designed horizontal evaporator and powerful steam turbine — is Worthington designed and made.

This means perfect coordination, with the added advantage that the Worthington user can place full responsibility for his system's operation on a single manufacturer.

Other compact, space-saving units are available in capacities of 150 to 2600 tons, each engineered by Worthington to give you many years of trouble-free, low-cost refrigeration.

Worthington Pump and Machinery Corporation, Harrison, N.J. Specialists in air conditioning and refrigeration for more than 50 years.

A7-8

Famous N. Y. Hotel Selects Worthington Air Conditioning

Famed for its luxurious appointments, New York's huge Commodore Hotel counts on Worthington centrifugal refrigeration equipment for a year-round supply of clean, invigorating air. Today's comfort-wise guests have learned to expect such up-to-date air conditioning as an essential feature of every modern hostelry.

Air Conditioning in Smaller "Packages"

Worthington's Self-Contained Air Conditioners, Model SYC, are built in 3 and 5 ton refrigeration capacities. These amazingly efficient "packaged" units are ideal for promoting better health and better business in every type of smaller business and industrial organization.

The Advantages of Worthington "Integration"

Worthington, making so many of the "inner vitals" — compressors, condensers, pumps, turbines, valves, fittings, etc. — of its air conditioning and refrigeration equipment, is able to combine these units into a completely "integrated" system that will assure you long, efficient, economical service . . . another reason why *there's more worth in Worthington.* See your nearby Worthington distributor for details.

WORTHINGTON
Air Conditioning and Refrigeration

For installations that SHINE....

EASTERN Stainless sheet gives your customer the best result! It is easy for him to keep in tiptop condition. It is lasting . . . develops no rust spots or blemishes. Its strength resists denting or distortion. And its hard smooth finish gives dirt no place to hide. Your customers like it because it is easy to clean . . . easy to keep clean, too.

It is no trick for you to put in Eastern Stainless sheet. You can cut, shape, weld or solder it quickly to make a job of lasting beauty. Eastern Stainless sheet is available NOW in the finish you need. When you need help in fabricating stainless steel, your Eastern Stainless representative gives "shirt-sleeve" assistance.

"Ask EASTERN for the Answer when STAINLESS is the Question." Most of the answers you will find in your copy of the illustrated handbook, "Eastern Stainless Steel Sheets." JMLee E-D3

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EASTERN STAINLESS SHEETS
FOR
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Industrial Suppliers Names L. H. Williford, Jr.

JACKSON, Miss.—T. M. Salisbury, vice president and general manager of Industrial Suppliers, Inc. of Jackson, has announced the appointment of L. H. Williford, Jr. as manager of the Refrigeration and Air Conditioning Division of Industrial Suppliers.

L. H. Williford, Jr.

Mr. Williford has been refrigeration sales engineer for the past year. In line with over 10 years of experience in air conditioning and refrigeration, Mr. Williford now has complete charge of this department.

Mr. Williford is assisted by Floyd J. Parker, formerly manager of a local branch of Melchior, Armstrong, Dessau in Harrisburg, Pa.

A. C. McCarty, of Jackson, comes to this company following long experience as a service and maintenance engineer and is in charge of city and counter refrigeration sales.

Atkins To Manage New Tesco Branch In N. J.

NEWARK, N. J.—Several major changes in personnel and property holdings have been announced by Tesco Distributors, wholesaler of refrigeration and air conditioning supplies here.

A new branch store, to be managed by George Atkins, was opened May 1 at Union City, N. J. Also the main office and warehouse at 29-43 S. Orange Ave. will be expanded.

Jay Levins, it is announced, will remain as sales manager and Sid Zackin as purchasing and store manager of the Newark store.

Fred Swanson is manager of the branch in Patterson, N. J.

Tom Phillips has been appointed dealers relations director, Paul Brokely and Vince Borrowdale as field men.

Gemco Sells $1,000,000 of Air Conditioners In 3 Months

ST. LOUIS—The sale and shipment of the first million dollars worth of Gemco Air Conditioners was recorded on April 10, just three months after the first new Gemco unit was taken from the assembly line at the General Engineering & Mfg. Co. plant in St. Louis, declares Willard R. Vogel, Gemco vice president and general manager.

Alfred U. Hears C. H. Beane

ALFRED, N. Y.—C. H. Beane, director of refrigeration engineering, The Brewer-Titchener Corp., addressed the students of Alfred university April 21 on "Plate Freezing."

Copper Import Duty Is Suspended For 2 Years

WASHINGTON, D. C.—Suspension of the four cents per pound import duty on foreign copper until March 31, 1949, was made law recently when President Truman signed legislation to that effect.

The legislation, designed to help build up the country's depleted copper stockpiles, was passed by both houses of Congress over the moderate opposition of representatives of mining states, it was reported.

These groups were said to have been assured by Republican leaders that the suspension would be repealed if it proved harmful to the copper mining industry.

Dogmeat Self-Serve Case Increases Sales In Pet Shop by 25%

ST. LOUIS—Overall sales of pet foods and supplies have grown 25% since Palmer Feed Co. at St. Charles and Broadway, here, has installed a self-service refrigerator for dogmeats, according to J. R. Palmer, secretary.

Prior to installation of the new box at the turn of the year, the Palmer Feed store had never considered carrying fresh dogmeat, according to Mr. Palmer. However, pressure from customers buying dog biscuits, fish foods, and other pet foods, grew so strong that one 8 ft. open-type experimental case was put in.

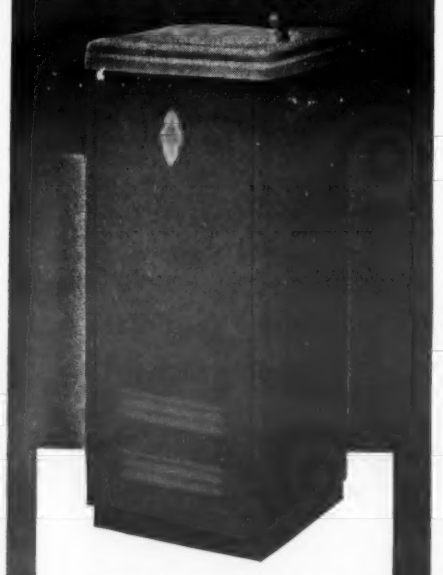
Ohio Contractors Group Elects Connor President

COLUMBUS, Ohio—R. A. Connor, Buckeye Refrigeration Co., Columbus, was elected president of the Central Ohio Association of Refrigeration Contractors at the annual meeting held recently.

R. J. Creamer, Commercial Refrigeration Co., was elected vice president, and W. H. Boye, United Refrigeration Service, was re-elected secretary-treasurer. Both are Columbus men.

The association is affiliated with the National Association of Refrigeration Contractors, and is working with it on unfair trade practices, merchandise inventories, codes and licensing regulations.

It's a REVELATION —that's all!



★ Exclusive Dealer Franchise
★ Now in quantity production
★ All sizes: Industrial and Commercial
★ The last word in...

ELECTRIC WATER COOLERS

Revelation Company
Division of
Interstate Engineering Corporation
2600 Imperial Highway
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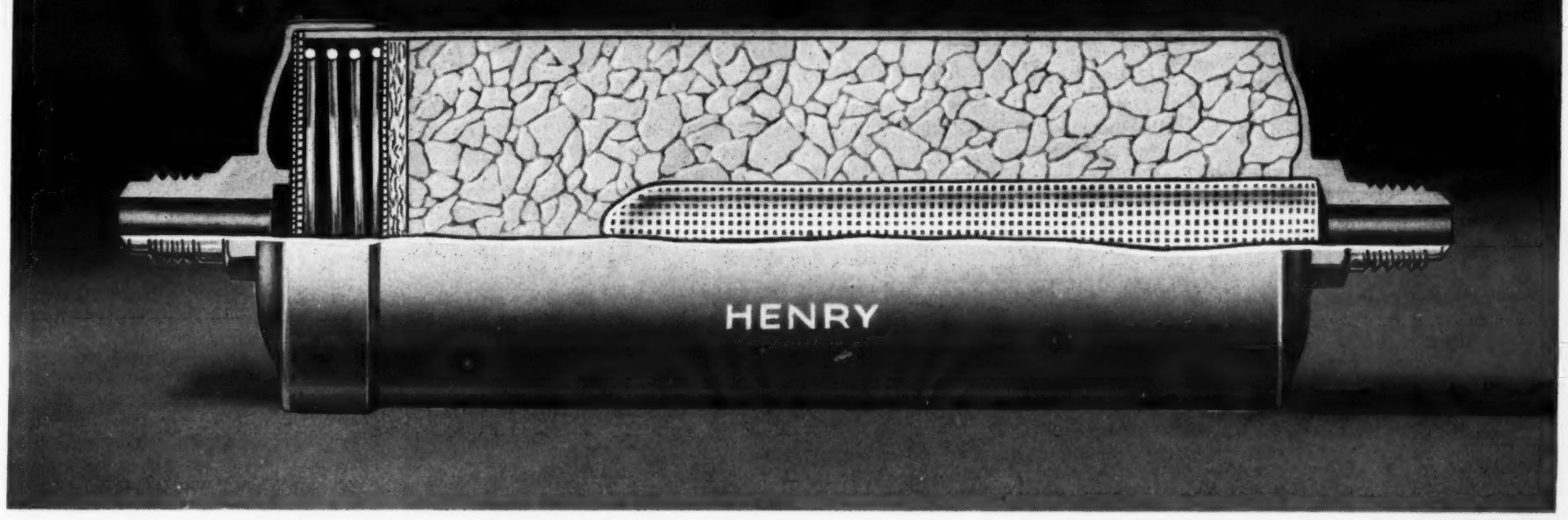
It costs no more— ...TO USE HENRY DRIERS

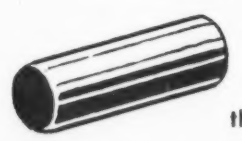


and you get these extra advantages...

THE PATENTED DISPERSION TUBE
Located at the inlet end, it distributes evenly and prevents "channeling." It insures full utilization of the entire Silica Gel volume. Pressure drop is less.

DEHYDRANT UNDER COMPRESSION SPRING
Keeps the Silica Gel tightly packed. This pressure prevents the Gel from self-abrading — stops "powdering." No clogging of screens, and no loose Gel can enter the refrigeration system.

PATENTED ABSO-DRY PROCESS
After unit is factory packed with Silica Gel, it is factory dried and charged with dehydrated air. With the audible "hiss" of escaping air when seal cap is removed on the job, you know that dehydrant is still dry and that there are no leaks in drier shell.

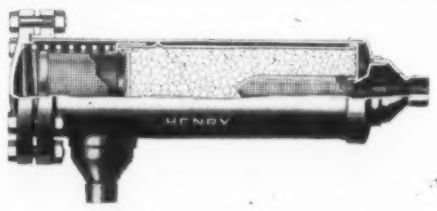


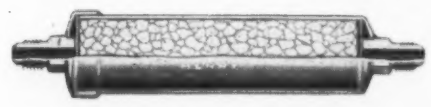
DRAWN BRASS SHELL
This costlier construction, by eliminating one end cap and one joint, lessens the possibility of leaks.

only Henry has a complete line

Leading Jobbers Recommend Henry Products Because They Are Interested In Giving You Greater Value For Your Money.

the wide range of Henry Driers includes the following:





SIZE CONNECTIONS — ¼" flare up to and including 2⅛" solder.
DEHYDRANT CAPACITY — 3 cu. in. up to and including 450 cu. in.
TONNAGE — Fractional up to and including 50 tons.

Other Henry Driers include models with felt sacks; with sintered metal filter discs; with dispersion tubes and special models for railroad and industrial uses.

HENRY VALVE COMPANY
Control Devices, Valves, Driers, Strainers and Accessories for Refrigeration and Air Conditioning and Industrial Applications
3260 W. GRAND AVENUE • CHICAGO 51, ILLINOIS Cable: HEVALCO CHICAGO

HENRY VALVE CO. CONTROLLING FLOW SINCE 1914

INSIDE DOPE

by GEORGE F. TAUBENECK

(Concluded from Page 1, Column 1)

boot-straps? That's the question which a vernacularly written, breezy, light-hearted, entertaining new book answers. Anyone who buys, sells, or makes—and that includes all of us—will learn plenty while laughing heartily during a profitable evening or two devoted to reading this book, which is entitled: "One Foot in the Door."

Mr. & Mrs. Consumer, for instance, will get a big kick out of reading all about the clever tricks-of-the-trade which able salesmen employ to get the customer's name on the dotted line.

And to those Sprightly imaginative creators who earn their living as merchandisers, salesmen, clerks, or advertising men, the publishers guarantee that this is one book they are sure to enjoy. It's anything but a dry-as-dust textbook, even though the author did devote many years to digging up and classifying the rule-of-thumb successful principles it expounds, and although these GREAT PRINCIPLES do constitute keys to success and profits.

"One Foot in the Door" is a bookful of laughs! Because each practical merchandising plank is nailed down with a sharply-pointed funny story, it's easy to remember those principles, and it's a pleasure to read on to the 400th page.

For sales managers, promotion managers, advertising managers, and other busy executives who are engaged in the arduous task of training a new generation of salesmen and merchandisers, this book should be immensely helpful.

Its original research and observations, philosophical passages and sheer humor will provide them with a compact uranium-mine of wit and wisdom with which to embellish and inspire their own writings and speeches.

Read it to learn, and read it to profit. Or just read it for unadulterated, hilarious pleasure. "One Foot in the Door" is the laugh-learn-profit book for everybody.

Unbecoming Immodesty

It has been a long time since "Inside Dope" has been so wildly enthusiastic about a book. Perhaps our steadfast readers will forgive our lapse into superlatives when they learn that the author of this book is George F. Taubeneck, who writes this column.

Honestly, good friends, we think you'll enjoy this book, and be proud to own it. The first edition (which sells for $3.00) is printed on high-quality paper, and is beautifully bound. To the first 500 AIR CONDITIONING & REFRIGERATION NEWS subscribers who order this useful, pleasure-giving volume, the author guarantees to supply personally-autographed copies—if they so request when placing their order.

How to Make More Money

There's a lot more to "One Foot in the Door" than laughs and entertainment, however. In it we have put much of the "dope" on *how to increase your business* we've picked up during the last 17 years of studying and reporting on the operations of successful dealers, managers, and salesmen.

If you absorb these principles, you ought to make more money during the hectic, troublesome years to come.

Perhaps the following list of chapter titles in "One Foot in the Door" will give a clue to the mine of information it offers you—and the light-hearted manner in which this "dope" is presented:

1. "This Is a Funny Book"
2. The Old Master—and How He Got That Way
3. Making Direct-Mail Advertising Respectable
4. Hair Grows on a Billiard Ball
5. Publicity Isn't Always Free
6. People See Better Than They Hear
7. How to Humanize Your Company
8. Tom Thumb Cartels
9. Finding the Rainbow's Pot-of-Gold
10. There's Always One Best Way To Tell your Story
11. You Can't Get Off First Base Without a Sales Manual
12. "It Pays for Itself"
13. Ask the Man Who Uses One
14. Everybody Loves a Convention
15. Sales Training Schools Must Be Clever and Entertaining
16. Circuit Riding Becomes a Profession
17. Make It Clear, Make It Simple, Make It Direct
18. Just a minute, Dear
19. Five Will Get You Ten
20. Mama Can Help, Too
21. Ask the Man Who Does the Work
22. Factory Open House Policy
23. Who Says You Can't Sell Abroad?
24. "Tell All" Promotion Rings the Bell

Order a copy today. If we've oversold this book to you, please return it. Your money will be refunded cheerfully.

From Byrd to Wurm: A Gnu

When the National Food Show opened last week in Chicago's International Amphitheatre, Charles E. Wurm was a proud man.

As president of the Quick Frozen Food Association of Chicago, Mr. Wurm exhibited 20-year-old hunks of frozen gnu meat, which had been presented to him by Admiral Richard E. Byrd.

Twenty years ago the Navy's polar explorer buried succulent gnu sirloins and rib-roasts (the gnu is a South African species of the ox tribe) in the perpetual snows of Little America. When he returned a few months ago, he dug up this rare package of gnu tidbits, found the package in perfect condition, and shipped it to Mr. Wurm.

Thus cold gnus is good news to the frozen foods business, because the early Wurm got the Byrd. (Forgive us, please: it's spring fever time).

Good Deed Backfires

From Boston comes an interesting report on the state of the retail frozen foods business—which currently is in a slump. It's a story of a good deed gone wrong.

Birds Eye quick frozen foods—always top quality—are sold largely from low temperature cabinets owned or leased by the Birds Eye division of General Foods. During the war, at government request, Birds Eye permitted retailers to store other brands of frozen foods in these cabinets.

Many of these "other brands" turned out to be of inadequate quality—a fact which housewives soon learned. Today, these packages move slowly, if at all. Low-temperature cases controlled by Birds Eye are still cluttered up with this stuff and Birds Eye can't get its own high-quality new pack of quick-frozen items into its own cases!

Another example of government "planning" and how it screws up our nation's economy!

One of Our Boys

Election of Edgar Morris, who is a Servel and Westinghouse distributor in Washington, D. C., as a Director of the Chamber of Commerce of the United States, has just been announced. And that's quite an honor.

Mr. Morris was chosen through mail ballots forwarded to the U. S. Chamber of Commerce by its approximately 2,700 National Councillors. This is the first time a business leader in the National Capital has been elected to this high office.

First nominated by the Board of Trade, Mr. Morris' candidacy was endorsed by more than 40 other organizations including the Merchants and Manufacturers Association, Hotel Association of Washington, D. C., Bankers Association, Graphic Arts Association, Master Builders Association, and the Washington Trade Association Executives.

The new U. S. Chamber of Commerce director was born in Pickens, South Carolina, educated at Clemson College and George Washington University, and is now president of the appliance distributorship that bears his name.

Selling In Reverse

A mountaineer domiciled in the remote Kentucky hills was mourning the loss of his prized cow. This bovine specimen had been struck by a passing train, and had departed into the green-pastured land where good cows go when they leave this Vale of Strife and Tears.

Eventually, a claim agent for the railroad visited the claimant farmer, and sympathized with the animal's owner over his loss.

"However," and the claim agent's voice hardened—"you must bear in mind that your cow was trespassing on our tracks. We wish to settle this matter in a peaceable manner, and without a court decision if at all possible," he continued in a stern tone. "What can we do that would seem fair to you?"

"Wal," replied the by-now-frightened resident of the hills, "ah ain't got much money, but do you all s'pose it would be all right if ah give you-all jus' two dollahs?"

AMCOIL ALL THE WAY!

SENSAIRE • LATENAIRE
ONE LINE OF AIR CONDITIONERS
FOR EVERY APPLICATION

Deluxe Food Conditioner — Pat. Pend.
Display Case — Food Conditioner Pat. Pend.
Zero Breeze — Low Temp. Unit Pat. Pend.
Double Shot Unit
Utility Downdraft
Alservice Open Face
Alservice Overhead Unit
Two-Way Ceiling Mounted
Reach-In Panel Unit

Cash in on the Amcoil Sensaire and the Amcoil Latenaire Conditioners—the *complete* line of air-conditioners. Fast Moving—Nationally Advertised—Remote and Self-contained Types—Immediate Deliveries—PROFITS FOR YOU! Act Now!

DEALERS
DISTRIBUTORS
WHOLESALERS
AMCOIL means profits for you!

AMCOIL LATENAIRE CONDITIONER

The answer to human comfort in warm humid climates—thrives on humidity! Patented revolutionary operating principle literally wrings moisture out of the air! Provides cool, healthfully conditioned air without that clammy ice-box feeling. Adjusts automatically to varying temperature and humidity conditions. Fully equipped, remote and self-contained models. Attractive streamlined cabinets make a handsome addition to any room.

Latenaire Conditioner self-contained Model SCL-250. Pat. No. 2,405,812.

AMCOIL SENSAIRE CONDITIONER

The answer to human comfort in warm dry climates. Specifically designed for comfortable air-conditioning wherever sensible heat loads predominate. Efficient, quiet operation; in both remote and self-contained types. Fully equipped. Beautifully streamlined cabinets, finished in attractive two-tone brown, crackle baked enamel.

Amcoil Extended Surface Fin Increases Capacities. Pat. No. 2,402,262.

Amcoil
AIR CONDITIONING • REFRIGERATION
AMERICAN COILS CO., NEWARK, N. J.

JUST OFF THE PRESS

Send for your copy of the new AMCOIL Air-conditioning catalog. Attractively printed in color, it describes and illustrates the complete line. Also included are complete engineering and selection tables along with a handy, new heat load calculator chart. Write today!

DISTRICT OFFICES:
Philadelphia: 250 North 15th Street, Rittenhouse 6-9563
Chicago: 215 W. Ontario Street, Superior 4859

MANUFACTURER'S REPRESENTATIVES
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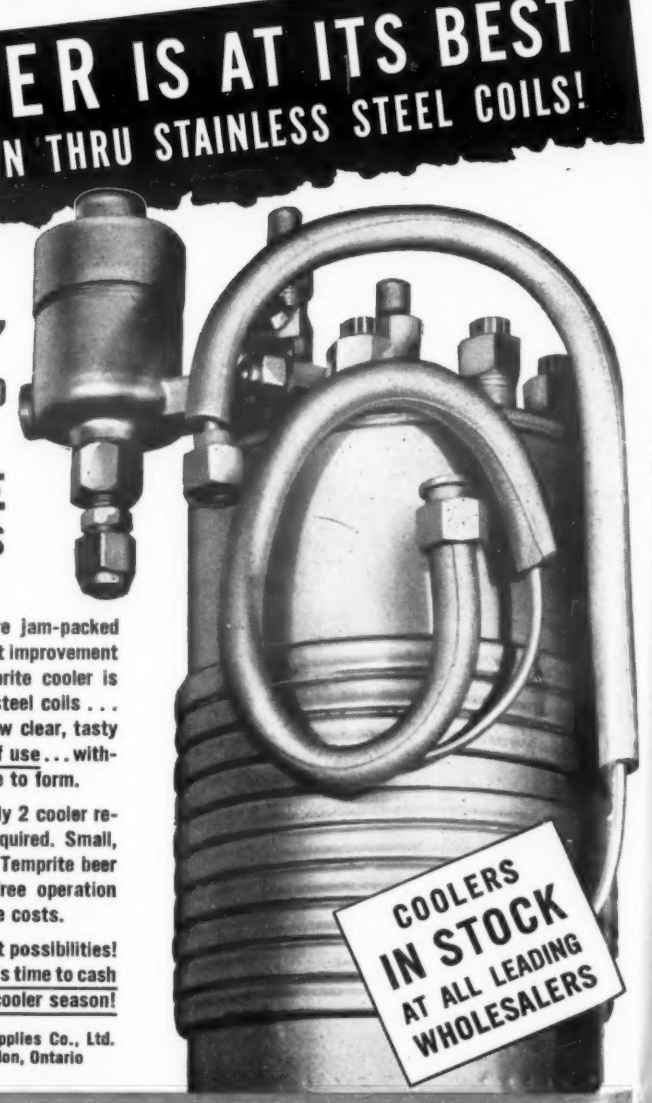
it's clear!

BEER IS AT ITS BEST
DRAWN THRU STAINLESS STEEL COILS!

"STAINLESS" IS STANDARD IN ALL TEMPRITE BEER COOLERS



Temprite beer coolers are jam-packed with sales features! Latest improvement on the fast-selling Temprite cooler is smooth, clean stainless steel coils . . . non-porous coils that draw clear, tasty beer from the first day of use . . . without waiting for beer stone to form.

Complete with valves. Only 2 cooler refrigeration connections required. Small, compact, highly efficient Temprite beer coolers provide trouble-free operation . . . greatly reduce service costs.

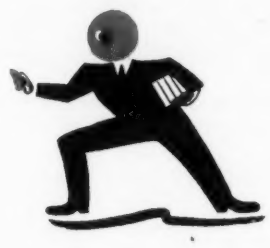
Get next to Temprite profit possibilities! Write us now for details. It's time to cash in on a big draught beer cooler season!

IN CANADA: Refrigeration Supplies Co., Ltd. 1127 Dundas Street, London, Ontario

COOLERS IN STOCK AT ALL LEADING WHOLESALERS

TEMPRITE PRODUCTS CORP.
Originators of Instantaneous 80° 40° Liquid Cooling Devices
43 PIQUETTE AVENUE DETROIT 2, MICHIGAN

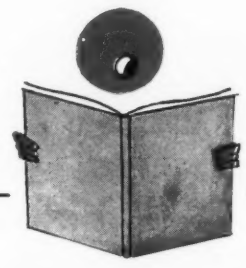
Every One in the Industry Should READ . . .



GEORGE F. TAUBENECK'S

ONE FOOT *in* THE DOOR

The LAUGH - LEARN - PROFIT BOOK



CHAPTER TITLES

from

"One Foot in the Door"

1. "This Is a Funny Book"
2. The Old Master—and How He Got That Way
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4. Hair Grows on a Billiard Ball
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24. "Tell All" Promotion Rings the Bell

PUBLISHED BY

CONJURE HOUSE

BOOK DIVISION OF

BUSINESS NEWS PUBLISHING CO.

450 WEST FORT STREET
DETROIT 26, MICHIGAN

. . . Because Every Laugh Drives Home a SOUND SALES PRINCIPLE!

"THIS IS A FUNNY BOOK," declares George Taubeneck in his heading for Chapter 1. That's true. You'll laugh! You'll *learn*, too.

"One Foot in the Door" is the laugh-and-fact-packed story of Specialty Selling. It takes you back through chuckling pages to the birth of the specialty merchandising art under John H. Patterson of N.C.R. fame, and it takes you forward—again with smiles and guffaws—to the shining future.

It clearly delineates the selling principles which years of experience have set up—and makes them easy to remember by associating these principles with humorous anecdotes. It vigorously points up the job ahead for sales management—tells what, where, why, when, and how.

It pleads eloquently for—and points the way toward—the more efficient distribution system that will be one of the strongest bulwarks of private enterprise.

It does all this so agreeably and fascinatingly that, when you finally finish it, you'll call it the most enjoyable book you've read in a decade.

"One Foot in the Door" will go to work on your mental processes. For a few days (after you've read it) you'll tell the funny stories you've read. Gradually, these yarns will merge, in your subconscious mind, with the original *how-to-merchandise* ideas you have absorbed. The residue of fact will stay with you. You'll find yourself applying it to your sales planning.

If you are a veteran sales or advertising executive, you'll soon realize that "One Foot in the Door" has recharged your thinking . . . cleared away doubts . . . suggested answers to a tough problem or two . . . recalled methods that were successful before and will be again (because they're fundamental).

If you are a rising young executive, without too much of the wile born of years, *you'll* profit from "One Foot in the Door," too. For it distills the experience of successful decades and successful promoters in one handy package . . . to use in furthering your own career.

Whether you are a veteran or a neophyte, you can laugh, learn, and profit from George Taubeneck's great book. You'll declare the $3.00 price one of the wisest investments you ever made.

USE THIS COUPON → ONLY $3.00 POSTPAID ← *USE THIS COUPON*

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Div. of Business News Publishing Co.
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DETROIT 26, MICHIGAN

PLEASE SHIP US ..... COPIES OF "ONE FOOT IN THE DOOR" AT $3.00 PER COPY, POSTPAID.

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Company.....

Address.....

By.....

$225,000 Job Heads 9 Commercial Installations Underway In Nebraska

LINCOLN, Neb. — Nine construction jobs involving commercial air conditioning and refrigeration installations have been started or are about to get underway in Nebraska, it was learned here.

Largest of the group is the $225,000 addition to the Gold & Co. department store here. The store's present air conditioning system will be extended and, it is reported, a larger refrigeration unit will probably be installed.

Others include a $60,000 ice manufacturing plant and a $10,000 office building at Scottsbluff, the $65,000 Sisters of St. Dominic hospital at Spalding, a $14,000 addition to the Pioneer Memorial hospital at Dalton, the $25,000 Harold Peterson mortuary at Nebraska City, the $21,900 St. Francis hospital at Grand Island, the $14,500 Dr. C. D. Howard medical clinic at Blair, and the $12,000 McGhie & Co. funeral home at Edgar.

Prepackaged Cheese In Op.n Case Ups Grocer's Volume by 300-400%

ST. LOUIS—An outstanding job of cheese merchandising is being accomplished by Molls, Delmar & DeBaliviere, here, St. Louis' oldest grocery store, through two-traffic-building innovations.

First, an open-front refrigerated display case was installed which resembles ordinary meat counters except that one-half of the 20 ft. glass front has sliding glass doors which may be removed.

Second of the innovations is prepackaged cheese sold under Moll's own brand name. These are sold in 8 ounce and one pound packages, the two most popular weights according to observations Moll's have made in their many years of experience.

The 20-ft. cheese case is located at the front of the store near the entrance. It forms one end of a rectangular section including a meat counter on one side and the bakery section on the other. The removable glass section of the case is taken off each morning in preparation for the day's business and replaced toward the end of the day when the traffic has slowed.

"In this manner we have eliminated the necessity of removing all the cheese stock to a refrigerator as in other self-service units," stated Charles Barba, manager of the store, "though the original cost of this case was rather expensive, $1,500 total, it has paid for itself many times over.

"Some cheeses sold as much as 300 to 400% more after the installation. We also profit in time saved for employes who are free to wait on customers desiring some less popular cheeses which are stocked in the non-self-service end of the cheese case. Contrary to belief, the counter did not eliminate an employe, but increased volume required one more.

PURO ELECTRIC WATER COOLERS
BRANCHES IN PRINCIPAL CITIES
MAIN OFFICE
440 LAFAYETTE ST.
New York 3, N. Y.
PURO FILTER CORP. OF AMERICA
DRINKING WATER SPECIALISTS FOR 40 YEARS.

For Silent Operation and Longer Wear
on REFRIGERATION and AIR CONDITIONING EQUIPMENT
Use
MANHATTAN WHIPCORD FHP V-BELTS
They grip without slip.
They flex without overheating.
They are uniformly constructed for longer life.
They deliver the power that makes your equipment DEPENDABLE.
RAYBESTOS-MANHATTAN, Inc.
"Keep Ahead with Manhattan"
MANHATTAN RUBBER DIVISION, PASSAIC, N.J.

Consumer Buys Entire Quick-Frozen Meal In Kroger Self-Serve Display

KANSAS CITY, Mo.—A special self-service display case for frozen bakery goods is a permanent feature of the new Kroger Esplanade store, opened in the Plaza of Kansas City recently.

The baked goods display is part of a comprehensive self-service section carrying exclusively frozen merchandise. Eight Hussman-Ligonier open refrigerators are used to form an enclosure from which housewives may take home a completely quick-frozen meal.

Included in the 6 ft. frozen bakery goods display are chocolate cookies, Roller-On pie crust and cinnamon rolls, Stownway Parker House Rolls, Sto-Away Frozen pies, a variety of biscuits and rolls, angel food, pound and lemon cakes, turnovers and other popular prebaked cakes.

Color photos are used along the ledge at the top of the case to illustrate the bakery products after baking at home. The extreme cold needed for keeping the bakery products at maximum good condition has been insured by extending six cold plates upwards, to act both as refrigerating units and dividers for the display of merchandise.

The Kroger stores formerly felt that frozen baked goods were a "service item" which required personal suggestion from salespeople for success. After several months of this type of promotion, self-service seems to have equally good results.

Super-Cold Sets Peacetime Record for Quarterly Sales

LOS ANGELES — A peace time sales record was established by the Super-Cold Corp. here during the first quarter of 1947, it was announced at the firm's recent annual meeting of stockholders. Sales during that period reached $1,586,267.

Lehigh Mfg. Appoints 3 New District Managers

(Left to right) O. J. Kesti, E. R. Murphy, and D. G. Portley.

* * *

LANCASTER, Pa.—New district managers have recently been appointed by Lehigh Mfg. Co., manufacturer of condensing units, covering areas in the East and Midwest, as well as on the west coast. They are:

E. R. Murphy (Brookline, Mass.), who will handle the New England states, the eastern part of New York state to Utica, and the eastern part of Canada.

O. J. Kesti (Detroit), who is scheduled to cover Michigan, Ohio, West Virginia, Kentucky, and Indiana.

D. G. Portley (Alameda, Calif.), whose territory includes the west coast, Montana, Wyoming, Utah, and Arizona.

AT SAN FRANCISCO
The Frozen Food Industry

IT CATCHES EVERY EYE AT EVERY ANGLE...
Any way you look at it, the new FRIGID-FREEZE three-dimensional display shows food in its most life-like, appealing, "buy-me-now" form! So startling it makes you come closer—and as you do, it changes shape! It exerts every bit of the sales-appeal in deliciously presented food—customers stop to look and stay to buy!
Your products have depth, realism, full-vision sales appeal!
Brilliantly lighted, full color, life-like products—interchangeable!
Brand-name and package get "can't-miss-it" display.

Prices and products available go here—easy to read, easy to replace.

HOLLYWOOD at its best never made a picture as real, as true-to-life as this display. For it's *more* than a picture—it has depth, body, perspective! So natural you're tempted to reach out and touch the food. It's done with a series of sparkling full color 3 dimensional photographs, ingeniously arranged and brilliantly lighted from behind.

This great new superstructure *clinches* sales with indirectly lighted, easy-to-read price cards. It's new, it's *exclusively* FRIGID-FREEZE, and it's available *now*—complete with cabinet or separately for mounting on your present FRIGID-FREEZE Cabinet!

OFF THE CHEST

WHAT DEALER CAN COVER FARM FREEZER MARKET?

Masterfreeze Corp.
Sister Bay, Wis.
April 24, 1947

Editor:

We have just moved into a new addition to our plant, creating about 14,000 additional square feet of floor space. Prior to this time Master Refrigeration Sales & Service Co. at Milwaukee, had been acting as our national sales agent. With this new addition to our plant, it enables us to handle all our future sales direct from the factory. Our policy will be to sell direct to dealers only.

We believe food freezers will be very competitive in the near future and that the high cost of handling an item such as we build by the distributor is too costly making it prohibitive. We just very recently completed a survey in which we sent out a questionnaire to all of our present dealers handling food freezers asking them various questions pertaining to this business. Ninety per cent of our dealers replied that they thought the retail price of food freezers was too high today.

It was necessary that we explain to them, if the retail price of food freezers were to be lowered it would also be necessary to lower the dealer's discount. In answer to what discount they thought the dealer should be entitled to there were equally as many said 25% as there were 30%. We are giving them the benefit of the doubt and extending a 30% discount.

With the increased production facilities, reducing our cost of production, and in conformity with President Truman's plea to reduce prices and avoid further inflation and a possible depression, we are pleased to state that our 14 cu. ft. food freezer's list price now is $365 and the 19 cu. ft. is $435 at our plant. There is, of course, a $7.50 crating charge added to this.

I certainly want to commend you on your articles pertaining to the need of selling farmers a freezer. In fact, I want to compliment you on your entire paper. I have been in the refrigeration business for almost 20 years and have subscribed to it from the first time I saw it.

I am especially interested in the article headed "Farmers Are Prosperous—They Need and Want Freezers—Why Neglect Them?" on page 16 of your April 14 edition. I have referred this article to every one of our dealers, asking them to read it. However, in view of the fact that many of them do not have this paper, I would like to know if we can get reprints of this article.

I agree with you almost 100% in the statements you make in this article, but I do not agree with you that all have been asleep about the facts which you state. I have been aware of all these facts for the past three years, but there are many complications in reaching the farmer.

The question is: What type of dealer can best serve the farmer? Who can best give him service in the event that he needs service for his freezer?

The large appliance dealer is usually located in a metropolitan area and caters to that type of trade, and he in many cases contracts for his service work and is not the best man to service this type of equipment.

The refrigeration contractor, who does commercial and household service, is the ideal man as far as service on the equipment goes. But he is busy today pulling his hair out wondering where he is going to get his next pound of "Freon" or the next coil of ½ in. copper tubing, or trying to figure out how he can meet certain union demands to pay his journeymen $2.00 per hour and still operate on a $2.00 service charge to the customer.

Then there is the small, independent serviceman who, incidentally, should be called a contractor. He operates in rural areas and, of course, has some of the same problems that the above-mentioned contractor has with the exception of the labor difficulties. But he is busy with service and is not sales-minded or he is asleep. He has no time to cultivate the farmer, as you mentioned in a previous article.

Then, of course, we have the farm implement dealer who is usually located in an ideal spot, but in most cases he is not in a position to service refrigeration equipment. Maybe we should make a refrigeration engineer out of him. International Harvester has been trying to do that for quite some time, but it is quite a long and drawn out affair.

So you see, there are some problems in cultivating that farmer. Who do you think should cultivate him? Who is neglecting him?

We have been trying to cultivate the farmer for the past three to four years. So have many other manufacturers. A great many of them are aware of the fact that farmers are prosperous; they need and want freezers so why neglect them? But apparently some of the above mentioned prospective dealers are asleep of the facts mentioned in your article. Maybe the above-mentioned dealers need to be cultivated so that they in turn can cultivate the farmer.

Let's have some more of your very interesting articles regarding the farm market for food freezers so that more dealers may see the light.

E. E. ANDERSON,
President

P.S.: In the above-mentioned prospective dealers I forgot to mention the automobile dealer and the drug store.

COMMON MAN NEEDS PLAN TO FIGHT COMMUNISM

Westinghouse Electric Corp.
246 East Fourth St.
Mansfield, Ohio
April 23, 1947

Editor:

Your March 31 AIR CONDITIONING & REFRIGERATION NEWS had an excellent presentation of the Communist situation and what the little man can do about it. Are reprints available? If so, I could use about 50.

I like the article because it suggests a plan of action for the common man. There are many articles, interesting articles, too, appearing on the subject of the menace—but they don't stir me and my fellow-fearers to action. They serve only to scare the hell out of me and I continue to mutter, "Why doesn't the government do something about this?" I forget that I am a wee little piece of said government.

What we need is: (1) Facts and more facts; (2) A plan of action for every individual.

And, we need the point hammered home that the Commies started as a small group, and relatively speaking, are still a small group, *but*, and that *but* is a big one, brother, they are an unrelenting, small group.

A study of their tactics is a tipoff to the counter action. And, the constant plugging that the Commies are relatively small should give impetus to the man who is concerned and asks, "What can I do, as one little voice?"

BOB RICHARDS

Stopped...Looked...and Cheered!

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NEW FRIGID-FREEZE 3 DIMENSIONAL DISPLAYS

BRAND-NEW MULTI-PURPOSE CABINET...

FOR FASTER SERVICE, MORE SALES!

The remarkable three-dimensional superstructure *attracts* customers — the cabinet helps them select their frozen foods *fast;* keeps traffic flowing. The non-fogging THERMOPANE glass doors enable the customer to *see* the particular packages wanted . . . and during peak shopping hours, the doors can be removed quickly and easily for fast-moving self-service. Actually, it's a complete sales and service unit! It creates buying interest, closes the sale and delivers the goods — all *you* do is rake in the profits!

Models immediately available for use in supermarkets, meat, and fish markets, ice cream and other frozen food stores — see your FRIGID-FREEZE representative or write for details *now!*

Illustrated, FRIGID-FREEZE Cabinet No. G-1046 equipped with 99-3 superstructure.

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Retail Price, Complete. F.O.B. Factory

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The exclusive, self-contained warning system . . . sounds an alarm whenever temperature rises above danger zone FROM ANY CAUSE. Not connected in any way with electrical system! Every freezer owner and locker plant needs one. Liberal dealer discounts, literature available.

CASH IN ON THE BIG SALES AND PROFITS

NATIONALLY ADVERTISED

WRITE FOR OUR DEALER PROPOSITION

FREEZRLARM COMPANY

832 S. LUDLOW ST., DAYTON 2, OHIO

Field Report

Before the war one of the most popular editorial features to appear in the NEWS was the "Field Report," which is now being resumed.

In the "Field Report" the editors and staff correspondents of the NEWS bring to the readers, not their own opinions and interpretations, but report what distributors, dealers, and service contractors are currently finding out about the market, prices, service charges, and all the other problems that arise in distributing the industry's products.

With Consumer Resistance Mounting, Dealer Trains Veterans In Art of Specialty Selling

By C. Dale Mericle

OKLAHOMA CITY — Training of young salesmen in the tried and proven methods of specialty selling has already been started by Dunn & Glosser Co. here, dealer for Norge, Maytag, and other lines.

"The appliance business is already back to the direct selling stage," declares John Glosser, partner in the firm with Ralph E. Dunn.

"We'll soon have more material than we can handle. Two weeks ago, for example, we were very short on irons and mangles. And then we received a big shipment. Now we've really got to go out and sell these.

"And the public here doesn't have much money now. The salaried and working people have lost their chips," he adds, pointing out that the average working man in these parts is making about $130 to $140 a month.

The appliance supply situation is about the same for this firm as for everyone else, he states. "Spotty" is the word for it. Some merchandise is in good supply. Other items, such as refrigerators, ranges, and washers are still scarce and in heavy demand.

But this spotty supply situation makes it all the more necessary to do a good selling job—on the slow-moving items, according to Mr. Glosser.

"A dealer can't expect his supplier to send him scarce items unless he makes it his business to move the merchandise that is coming through in quantity."

Despite the relatively low income level, as compared with some of the country's industrial areas, prospects' reactions to present-day price levels in the appliance field is almost strictly a supply-and-demand proposition, he indicated. Customers don't question prices of scarce, hard-to-get items, but they're inclined to shop around before buying an item that is in good supply, he said.

The greatest resistance is in the replacement field, he went on. People who are buying appliances for the first time to set up new homes, for example, naturally consider many of these appliances as a necessity and are anxious to get them at almost any price.

Those that already have the appliances and are logical prospects for replacement sales hesitate to make any major purchases now, according to Mr. Glosser.

These are some of the reasons why the firm is well started in its program to train salesmen, he says.

The training program is rather elaborate for a firm of this type, Mr. Glosser believes. Four men, all war veterans, are now being trained under the direct supervision of Louie Pyle, sales manager and himself a young veteran.

"One reason we've hired these young veterans is that we feel that we'll be catering to 'young business' from now on," says Mr. Glosser. "We think the biggest market is going to be in the new, young families that are starting up."

This ties right in with Mr. Glosser's previous statement regarding sales resistance in the replacement market as compared with the first-time sales to new families.

Under a rotation plan, these men get experience and training in all four of the outlets maintained by Dunn & Glosser. There are three stores in Oklahoma City, including the main store, and one in Edmond.

In addition, Sales Manager Pyle takes a man out with him regularly to demonstrate the direct selling and closing methods as employed in the prospect's home.

"Probably we don't have to do much, if any, of this direct selling in the home at the present time, but we may have to soon, so we're training the boys now," explains Mr. Glosser.

"And very soon we'll start canvassing for prospects," he went on. "It won't be the door-bell punching cold canvass. Rather, we'll check our customer files, including our service lists. During the past five years we have opened 20 to 30 new service accounts every week, which will give us a good prospect list."

Salesmen, incidentally, are now being paid on a straight salary basis, but the firm may shift over to salary and commission basis in the future.

The firm does an extensive service business on appliances and radios, and the annual volume on parts sales amounts to between $50,000 and $60,000, according to Mr. Glosser. Eight men are employed in the service and parts department.

Messrs. Dunn and Glosser have been in business here since the early 1930's. They had been partners in New York City, but their appliance business folded during the depression back in 1932. So, they set out for Texas, but after a look at Oklahoma City, decided to set up shop here.

Mr. Dunn was formerly a district man for Norge, and now he more or less concentrates on getting merchandise deliveries from manufacturers and distributors, while Mr. Glosser follows through from there.

Water coolers are also a big item with this dealership. Sales amount to 200 or 300 annually.

"The fact that it's rather hot and dry down here accounts for some of these water cooler sales," explains Mr. Dunn, "but it's also the result of the South's becoming more progressive every minute. Office managers have found that it pays to install water coolers. Otherwise, the employes are frequently running out to get a coke."

Commenting on another leading question of the day, Mr. Glosser stated, "there is a very limited market here for home freezers, probably because the people misunderstand what the freezer's intended for."

These two men started out from New York City in 1932 to drive to Texas, but stopped in Oklahoma City to start an appliance retailing business—and they've been at it ever since. John Glosser (left) and Ralph E. Dunn, with a new Norge refrigerator.

Dealer Operation Split Into 5 Departments

DALLAS, Tex.—Five separate divisions for sales and service both in the store and outside the store now comprise the appliance department of Sanger Bros. where demonstration, planning, and installation services are an integral part of the appliance shop's postwar setup which is proving satisfactory to both store and consumer.

The five divisions supply (1) refrigeration equipment, (2) laundry equipment, (3) radios, (4) phonograph records, and (5) kitchen planning, maintained and operated by 10 persons on the sales staff and eight persons in the service section.

Refrigeration equipment includes electric refrigerators, frozen food cabinets, and air conditioning equipment, such as room coolers and window fans. Washing machines and electric ironing machines make up the laundry equipment. When available, electric driers will be added so that complete laundry units may be offered.

Sanger's special services offer outstanding conveniences to consumers building and furnishing homes.

The kitchen planning service is also complete. A specialist on the staff goes out into the home to help the housewife design her kitchen. Her kitchen equipment is supplied by Sanger's and is installed by the service staff of the store. This service includes painting the walls to leave the kitchen completely ready for the housewife when the Sanger staff leaves to start on another job.

Eight skilled persons, including cabinet men and installation men in the service section, do complete jobs of installation.

Kitchen installations and pumbing jobs are only a part of the service. For example, if a customer wants a floor model radio set to fit into the center of a library wall or concealed in a closet, the Sanger service crew does everything possible in matching colors and textures of wood to produce an expert, neat job.

You can't *see* Bonderizing* after the final finish is on. But what a difference its presence makes in the service lifetime of that fine finish!

Bonderizing creates a solid coat of tiny, toothed phosphate crystals — millions of them — to anchor the organic finish, to retard rust and corrosion, to bar moisture from the base metal, to prevent spreading finish failure around accidental nicks and scratches.

Buyers expect that "showroom finish" to last through years of hard service in their kitchens. That's the reason leading manufacturers use Bonderizing on refrigerators, frozen food chests and cabinets. That's the reason women want to know, "Is it Bonderized?"

Bonderizing—protected fine finish—is a sales feature *your* product should have. Write for full information.

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BONDERIZING Holds Paint to Metal | PARKERIZING Inhibits Rust | PARCO LUBRIZING Retards Wear on Friction Surfaces
PARKER PRODUCTS CONQUER RUST

Universal's Sales Sensation . . . The FREEZMASTER
$595 WITHOUT SUPERSTRUCTURE
$695 AS SHOWN

Operating Costs 25% Below Average For Similar Units

Length 88"
Width 30"
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Superstructure 26" high
Capacity approx. 17 cu. ft.
Temperature range 0° to 30° below 0°

Here's super-salesmanship in a shining white case with stainless steel top. All-steel electric welded construction. Gold Bond Zerocell insulation. Tank of convenient depth. 100% rust-proof cold plates, vapor sealed. Double pane ball-bearing doors girded with stainless steel. Built for long service. Model C-200-S.

Dealer inquiries invited. Above prices list—uncrated F.O.B. Los Angeles.

Call or Write for Information

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1854 S. Western Ave., Los Angeles 6, Calif.

Kansas City Contractor Licks Many Problems To Install Units For Photographic Developing In Cramped Quarters

KANSAS CITY, Mo. — Excellent example of how the ability to design "custom" refrigeration to fit peculiar specifications can benefit both the refrigeration dealer and the customer is the novel developing-fluid refrigeration system which Articaire Refrigeration Co. here recently installed at the Elko Photo Co. of the same city.

Elko Photo Co., one of the world's largest processors of photographic film and doing a mail-order business which covers most of the country, was experiencing a severe quality problem when the call went out for refrigeration to overcome it.

PRINTS WERE CLOUDY

Because of war changes in film developing chemicals, a condition which existed for several years, the Elko company found that film and prints made under standard hypo and fixing methods were likely to yellow rapidly, and the print become cloudy —sometimes only a few days after roll film was developed and the prints mailed to customers.

There were many complaints forthcoming from people who had paid for developing and finishing, only to receive in return cloudy, worthless prints which had "spoiled" in the mailing. The company's good will was in danger, and in addition, there had to be many refunds and adjustments made.

FIXING THE BLAME

Striving to overcome the problem, the Elko management traced every step in film handling and printing methods, and finally fixed the blame on 10 large developing solution tanks into which all film goes after being received in the mail.

The 10 tanks, all 40-gallon units provided with circulating pumps to keep the hypo solution fresh, were found to be operating at far too high a temperature for commercial mass output. At above 57° F., it was found, the developing chemical was likely to break down in potency, failing to "fix" the opposing chemicals on film negatives and photographic paper.

When Ted Rostock, engineer and owner of the Arcticaire Refrigeration Co. was called in, he saw immediately that refrigerating each of the 10 tanks by coils would keep the chemical at maximum potency the year around—but at the same time that because of the all-enclosed, crowded nature of the photo finishing plant, standard refrigeration methods could not be used.

PROBLEMS ENCOUNTERED

Not only was there no space for compressors and control equipment in the developing room, but it was also found that the developing chemical itself would eat away coil tubing or plates, as well as supports fastening it to the tank.

In answer to a desperate plea from the Elko concern, however, he did a little research into the problem, and determined that by removing storage shelving from underneath the rack used for heavy equipment at one side of the room, refrigerating compressors could be installed, and equipped with a special blower to provide cooling air for the condensers.

He tested several types of acid proof cementing materials at the same time, and developed one which could show sufficient strength to keep cooling coils in place while protecting them from the developing chemical's acids.

The entire problem of poor developing and finishing vanished with the installation of the refrigeration system which now keeps each tank at a steady 55° F. the year-round, irrespective of outside temperatures. Each tank or "crock" is cooled by two refrigerating plates, one on either side, 4 ft. deep and containing ⅝ in. copper tubing in tight coils, with the coil side directly against the wall of the tank.

The coil and copper plate unit is fastened to the tank with "hydrolene"; a tar solution which hardens to cement-like durability, and is 100% acid proof. All exposed tubing leading to the tank is likewise coated, to prevent the chemical reaction between copper and developing fluid.

10 UNITS SUPPLY COOLING

Five Lipman compressors, mounted in a row underneath the rack on the wall, handle the 10 tanks, two on each unit. Each is thermostatically controlled and "overpowered" so that in the event of a breakdown when all 10 tanks were needed at once, it would be possible to hook another pair of tanks on to the newest compressor.

Water cooled units could not be installed due to the difficulty of piping water into the room, already crowded with electrical outlets and conduit. The air-cooled compressors are kept from overheating by closing in the space in which the five Lipman units are installed, and installing a 12-in. blower fan at the left end.

The heavy current of air from this fan is exhausted at the opposite end through a tunnel leading to the outside of the building, sufficiently large to create a draft in addition to the fan force.

In several months of operation, it has been found that each compressor runs at a safe cool temperature so long as the fan blower is being used, and that film or prints as finished in the 55° F. tanks are as good as commercial printing methods will allow.

Krakow Will Direct Sales For Frostedaire

NEW YORK CITY—S. James Krakow has been appointed director of sales for the Frostedaire Corp., manufacturer of refrigeration equipment here, according to a company announcement.

Mr. Krakow was previously with General Refrigerators Corp.

Only COEY Cooling Towers bring you the high efficiency of

FLOATING FILM

Rogers' "COEY" Floating Film Cooling Towers apply a cooling principle widely endorsed by engineers and contractors; bring you high efficiency in cooling tower units:

HIGH CAPACITY - LOW WEIGHT
SILENT OPERATION
CONSERVES WATER-LITTLE SPRAY LOSS
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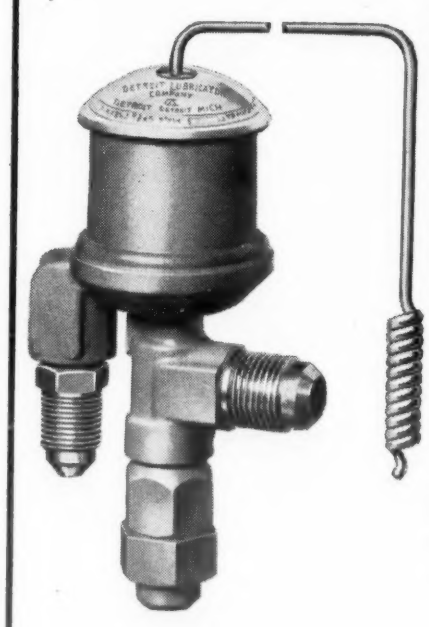
THERMOSTATIC EXPANSION VALVES

You can place complete dependence upon these two valves. Stake your reputation on them—they never let you down. Try these valves on commercial installations from ½ to 3½ tons Freon-12.



No. 573

ALL THE DEPENDABILITY OF THE 673 FOR SMALLER INSTALLATIONS

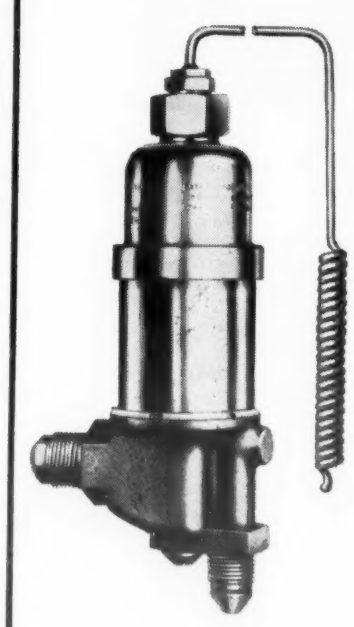
This valve, in ½ ton (Freon 12) capacity, has the quality and operating characteristics of No. 673. Designed for small commercial installations, its double diaphragm gas charged power element permits close superheat control at low suction pressures and provides motor overload protection in its simplest, most effective form, using only one power element.

UNIT NUMBERS OF NO. 573 VALVE

Stock Items with Your "Detroit" Wholesaler Use "Detroit" Unit Numbers When Ordering

Unit No.	Refrigerant	Max. Pressure	Connection
57300	Freon-12	45	Inlet ⅜" SAE for ⅜" x ½" SAE for ½" x ⅜" reducing reducing nut. Outlet ½" nut
57309	Freon-12	10	
57311	Methyl	35	
57315	Methyl	5	

Rated at ½ ton Freon-12 or .9 ton Methyl



No. 673

FOR MANY YEARS "THE STANDARD OF THE REFRIGERATION INDUSTRY"

"Detroit" No. 673 has a long record of dependable performance in a wide variety of installations and has been, for many years, "the standard of the refrigeration industry". Designed for average size commercial and air-conditioning installations. Sensitive and accurate in operation —gas charged for instant response and reduction of motor load during pull-down cycle. Duraflex bellows and Delubaloy needles and seats resist corrosion and assure long life.

UNIT NUMBERS OF NO. 673 VALVE

Stock Items with Your "Detroit" Wholesaler Use "Detroit" Unit Numbers When Ordering

Unit No.	Refrigerant	Max. Pressure	Connection
6731968	Freon-12	15	Inlet ⅜" SAE for ⅜" x ½" reducing nut. Outlet ½" SAE
6731428	Freon-12	55	
6731563	Methyl	10	
6731411	Methyl	40	

Rated at 1 ton Freon-12 or 2 ton Methyl

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Give the Bones to Fido:

Boneless Meat Proves Okay for Freezing; Better Packaging Urged for Freezer Foods

ASHVILLE, N. C.—"You can give the bones to Fido—just freeze the meat," D. C. McCoy, food technologist for Frigidaire Division of General Motors, told members of the Southeastern State Regional Locker Convention during a recent meeting here.

"Contrary to popular belief, recent tests at Michigan State college indicate that removal of bones from meat prior to freezing and cooking does not impair the flavor," he declared.

This frozen food innovation was made public for the first time by Mr. McCoy when he addressed the Convention on "Frozen Food Packaging." He was granted special permission to make initial announcement of the new findings by Dr. L. J. Bratzler, assistant professor of the Animal Husbandry Department of Michigan State college, who recently completed a series of year-long experiments with frozen beef.

"Dr. Bratzler's experiments disprove an old bugaboo—that the removal of bones from meat prior to freezing and cooking lessens the flavor and quality," Mr. McCoy asserted. "The tests revealed that boning the meat has absolutely nothing to do with taste or juiciness. Experienced taste-testing committees could detect no difference in the flavor of retail cuts of good grade beef—either cooked with the bones or without."

In analyzing this new conception of meat handling, Mr. McCoy pointed out that three important resultants are evident: (1) Cooking bone with meat muscle and fat does not improve the flavor of the meat, (2) packaging boned meat will be easier, and less damage to wrappers will result while in storage, and (3) removal of bones from meat prior to freezing will save up to 35% of frozen storage space.

Save Storage Space

"Vast savings in storage space can be realized by the locker operator," he explained. "Beef that has been boned prior to being placed in frozen storage will take up 30 to 35% less space. The same will hold true for the homemaker when meat is transferred from the locker plant to the home freezer. With no bones to puncture the wrapping materials, there will be less chance of dehydration of the product."

Mr. McCoy emphasized that at least 50% of successful production of high quality frozen foods lies in the use of suitable wrapping materials and proper application.

"I cannot emphasize too strongly, the importance of locker operators using a good grade of wrapping materials and applying them correctly," he stressed, "if he wants to protect the future of the frozen food industry and his own business. During the war many locker plant operators became lax with packaging—simply because better types of materials were not available.

"The argument is often advanced, he continued, "that use of the better wrapping materials is too expensive. Recent studies by Dr. J. D. Winter, assistant professor of horticulture, University of Minnesota, indicate that this is not the case. High quality wrappers, while more expensive per pound in initial cost, actually are as cheap or cheaper than the poorer materials—per pound of meat wrapped. As the makers of the better materials are able to increase production, it is entirely possible that the costs may decrease.

As McCoy Sees Cost Factor

"In the final analysis, let us approach the problem from another viewpoint. Assume that it does cost one-cent more to wrap a three or four dollar roast with the better-grade materials. I seriously question whether any of your customers will argue about this one-cent additional cost if he can preserve the quality of his meat and take home a more palatable and edible product.

As a matter of fact, many pieces of meat which I have examined, wrapped in poor quality material, were sub-standard and in many cases not edible. There is no surer way to create dissatisfaction with frozen foods than by distributing a flavorless, unpalatable product."

He pointed out that the first essential of a good frozen food wrapping material is that it must be an excellent moisture vapor barrier.

"Frigidaire's work with wrapping materials for frozen foods has been quite extensive," he told the convention, "and has been supplemented by a great deal of work for the United States Army during the war in connection with moisture vapor-proof materials for protecting metal parts against rust.

"In the case of frozen food, we are trying to keep the moisture inside the package—while for Army parts, we tried to keep the moisture outside the package. In either case a high-grade moisture barrier is required."

Other important characteristics of satisfactory moisture vapor-proof materials were reviewed by Mr. McCoy.

Requirements For Meats

For meats, the wrapper should be non-toxic, odorless, easy to apply, and easy to mark for identification. If such materials are to be used for bags and packages, for fruit and vegetables, they should be easily heat-sealed.

Such materials should be waterproof, stain-proof, and grease-proof along with having sufficient structural strength to withstand handling and low temperatures. If applied to meat, wrapping material should strip clean from the surface without leaving flakes.

"Even if the material is a good moisture vapor barrier," Mr. McCoy said, "proper application is necessary to protect the product against dehydration. The wrapping material must be pressed tightly against the surface of the meat. Where the wrapper is not in contact with the meat, a slight surface dehydration is likely to result.

Must Adhere To Surface

It has also been noted in our experiments that if the wrapper does not adhere to the meat surface, a slight amount of moisture from the meat will collect as a light frost between the surface and the wrapper. When the frost is brushed away, the meat has a dehydrated appearance. If the material is not a good moisture vapor barrier, the longer the meat is in storage—the deeper the dehydration extends."

The food technologist advocated the use of the "drug store" wrap rather than the "butcher" wrap.

"Tests have shown," he pointed out, "that meat packaged with the 'butcher wrap' dehydrated faster than similar cuts packaged with the 'drug store' wrap. The latter method can allow moisture vapor to pass through the folds of the paper.

"The 'drug store' wrap consists of an interlocking fold on both ends of the package with excess air forced out before completing the wrapping operation."

Use of Stockinette

Application of the stockinette overwrap was stressed—especially with plastic or plastic-coated materials. Mr. McCoy also urged that individual cuts of meat should be separated with wrapping material prior to packaging and freezing; otherwise the housewife will find it difficult to remove the proper allotment of meat for her cooking requirements.

He recommended a practical frozen food service for the farm home, which combines the advantages of the home freezer and locker plant.

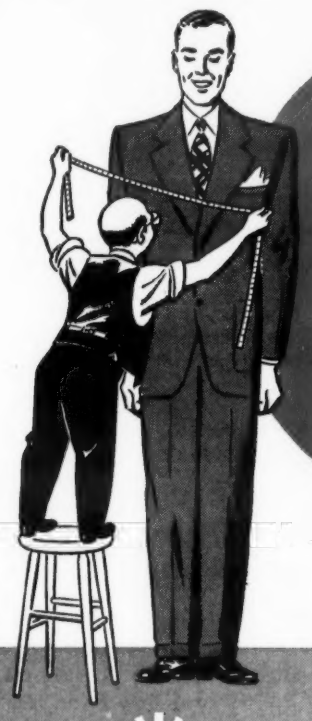
"The average farm family can hold down the initial expenditure for a freezer by buying a medium-sized model and supplementing it with additional rented storage space in a locker plant," he concluded.

"The daily operating expense and upkeep for the medium-sized home freezer is less than for larger models. By channeling its meat through the locker plant, the farm family will be able to avoid the evils of barnyard butchering and can take advantage of expert meat processing afforded by the locker plant."

Mexico Seeks Loans For $12 Million Cold Storages

WASHINGTON, D. C.—Construction of a number of food processing plants in Mexico at a reported cost of $12,000,000 is said to be waiting on approval of requests for credits made to the U. S. Export-Import Bank by the Mexican government.

The project would include four plants for dressing and refrigerating meat, two tuna fish canneries, and plants for freezing shrimp and canning fruits and vegetables. Under the program, a portion of the output would be exported to the U. S.



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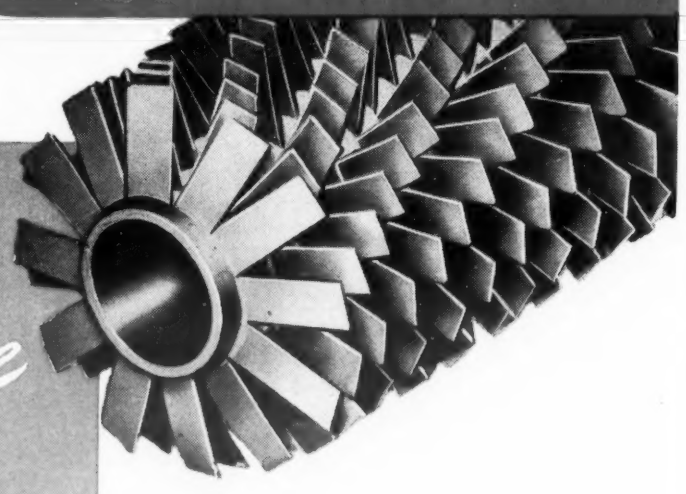

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Have you a heat transference problem? Maybe we can help you by "custom tailored" engineering. Remember that Tilco Fin extended surface tubes can be fabricated (without any need for special dies)—

- *with* fins that are spaced as wide as 3 rows per inch
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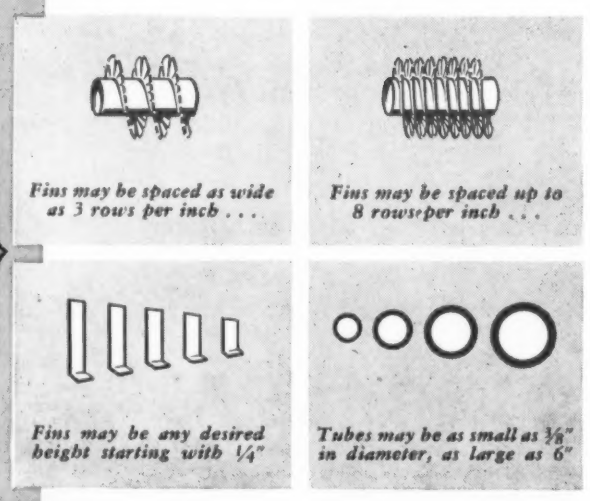
We therefore can easily "tailor" tubes for you according to *your* needs. And our wide experience with finned tube problems often helps us suggest solutions for knotty problems. Finally—we specialize exclusively in the manufacture of finned tubing in straight lengths, so we are *anxious* to serve you. Call on us for any kind of information, without obligation.



Fins may be spaced as wide as 3 rows per inch . . .

Fins may be spaced up to 8 rows per inch . . .

Fins may be any desired height starting with ¼"

Tubes may be as small as ⅜" in diameter, as large as 6"

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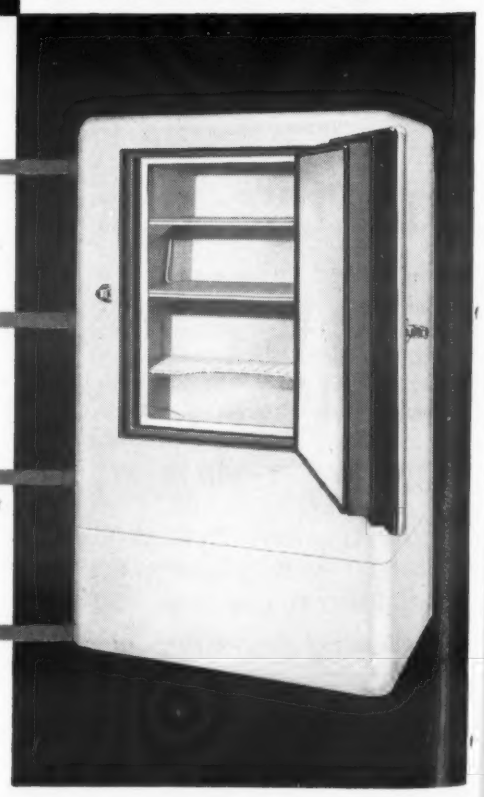
A STAND-UP FREEZER *that's a* STANDOUT!



14 cubic feet of space holds 500 to 700 lbs. of food

made in two sections for easy handling

steel construction

4" fiberglass insulation

three step door construction

two cold plate shelves & large backplate for quick freezing

adjustable wire shelf

deep well for bulky foods

NO DIGGING! NO BENDING!

Benbar's upright, open-shelf construction, providing quick and easy accessibility at all times, makes it the preferred type freezer.

some dealerships are still available

BENBAR FREEZER MILWAUKEE

manufactured by
BEN BAR
sales, inc.
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Use of Activated Carbon for Air Purification Lengthens Apple Life, Lessens Discoloration

Research Indicates Broad Field for This Method Of Purging Odors from Refrigerated Warehouses

NEW YORK CITY—The results of research and field installations in refrigerated apple storage warehouses, conducted under the direction of Pros. R. M. Smock and F. W. Southwick of the Cornell university Agricultural Experiment Station, indicates a broad field for activated carbon air purification in many other types of cold storage plants.

Thorough tests extending over several years have revealed that carbon-purified air lengthened the storage life of apples by at least 25%, adding a full month or more, and also minimized skin "scald" or discoloration. A longer storage gives the farmer considerably more latitude in picking favorable markets while reduction in scald preserves the sales value of the fruit.

It has long been known that the ripening rate of many fruits could be increased by artificially introducing ethylene gas into the storage atmosphere. In recent years it has been discovered that a number of fruit varieties give off ethylene as they ripen. As few as 1% of ripe apples could accelerate the ripening of other apples in storage, the Cornell studies found.

The effect of the ethylene would be small if all the apples were picked and stored at the right time, and if varieties with different ripening rates were stored separately. However, this is rarely possible or practical.

There are certain other gases, as yet unidentified, released by apples in storage which, if allowed to accumulate, will actually burn the skin of certain varieties and result in a "scalded," brown appearance. This nuisance is probably the most general and universal hazard peculiar to refrigerated apple storage.

Formerly the most common method of controlling scald has been to wrap the fruit in mineral-oil impregnated paper which would dissolve the scald-forming gases. The Cornell experiments sought a simpler, cheaper, and perhaps more efficient method of scald control.

Apples will readily absorb foreign odors. Most apple storages have no such odor problems but, on occasion, absorption of extraneous odors by the fruit may affect its flavor and hence reduce its market value. Vagrant and unwanted odors are sometimes picked up from other produce stored with the apples and from certain types of building materials.

Activated carbon air filtration has effectively reduced these risks in apple storage, thanks to the unique affinity that exists between this adsorption medium and gases and vapors.

Equipment required is basically simple. A small blower draws the storage air through the carbon which is suspended in cylindrical, hollow-walled canisters and a larger blower distributes the purified air throughout the storage room.

Where forced air cooling units are already installed no additional large blower is required for air distribution. The storage air is constantly recirculated through the carbon bed which extracts and holds naturally evolved ethylene, scald gases and any extraneous odors that may be present.

A considerable number of commercial-scale tests have been carried out in New York State. The results for the most part have been highly successful. In the less successful cases it was invariably found that the equipment had not been correctly planned or installed; either insufficient carbon had been employed or air circulation had been poor.

Although further studies may revise this standard somewhat the present practice is to employ one canister for each 200 bushels of apples. Complete air circulation is essential as obviously in an attempt to maintain pure storage atmosphere, all the air must be brought into contact with the carbon at regular intervals.

Among the many and diverse applications of activated carbon air purification, apple storage installations stand out as perhaps the most economical and efficient from the standpoint of cost. Outside of electric current, the sole operating cost involved is annual reactivation of the carbon which retains its adsorptive capacity indefinitely.

On a five-year basis the total expenditure is less than a cent and a half per bushel, per year. For example, to install and operate a carbon air purification system in a 10,000-bushel storage warehouse would cost around $150 per year. This figure includes blowers, motors, and current as well as the filtration equipment.

A continuing research program in other cold storage fields (meat, dairy and poultry products, other fruits and produce) indicate that substantial benefits and economies may be expected from maintaining purified air in these storages.

This method of purging the air of odors is already well established in the refrigerated locker industry where small portable units are employed in the chill, freezing, aging, and locker rooms to prevent an excessive odor accumulation and flavor transfer between the stored products.

* * *

These Canisters Help Apples Last Longer

—Photo Courtesy of Cornell Agricultural Experiment Station

In this apple storage installation, a small blower draws the air through these canisters containing activated carbon and a large blower distributes the purified air throughout the cold storage room.

Kelvinator Buys More Factory Space In Detroit

DETROIT—Additional expansion of Kelvinator and Leonard electric appliance manufacturing facilities in Detroit through purchase of factory buildings near its present large Plymouth Road plant here has been announced by R. A. DeVlieg, vice president in charge of manufacturing, Nash-Kelvinator Corp.

Located on a five-acre plot at Whitcomb and Fullerton Aves., on the Pere Marquette railway, the one-story buildings cover approximately 60,000 sq. ft. They were formerly part of the Evans Products facilities.

A-P Names Hutchinson Canadian Representative

BRANTFORD, Ont., Canada — Newly appointed Canadian representative of the Automatic Products Co., is J. E. Hutchinson of Brantford, Ont.

Widely known in the refrigeration and air conditioning and heating fields, Mr. Hutchinson has been associated with several large Canadian firms over a period of years. Though his headquarters are to be in Brantford, he will represent Automatic Products throughout the Dominion, with the exception of British Columbia.

Mr. Hutchinson will handle the firm's complete line of refrigeration valves and oil controls.

He will work with wholesalers and manufacturers on merchandising and engineering problems.

Ranco Launches House Organ Titled 'Contact' for Employes

COLUMBUS, Ohio — Ranco, Inc. here, maker of controls for refrigeration and air conditioning equipment, has launched publication of a new employe house organ titled "Contact."

The magazine will be published monthly under the direction of Louie Levengood, industrial relations manager. He will be assisted by 33 other plant editors and reporters for the firm's more than 1,000 employes.

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IMMEDIATE DELIVERY!

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Complete with or without units

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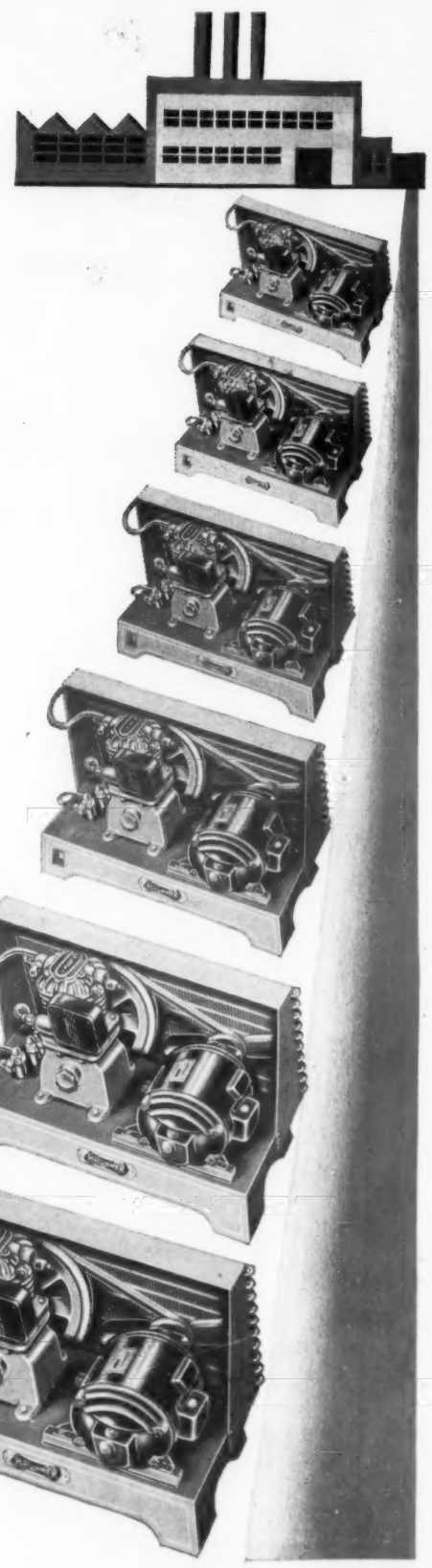
THOUGHTS FOR MERCHANDISERS

THE LONGEST WALK A CUSTOMER EVER TAKES!

...when he walks off your boards dissatisfied, displeased and distressed. To make him a profitable customer again costs plenty, and the merchandising tragedy is that such costs can be avoided. A thoroughly dependable condensing unit is one of the surest steps you can take to safeguard good will, and protect your reputation for quality. And "BRUNNER" has always meant dependable condensing units. For many manufacturers BRUNNER is a *three way investment* in sales features—an investment in quality prestige, an investment in dependable service, and an investment in year 'round low maintenance cost.

BRUNNER MANUFACTURING CO.
Utica 1, New York, U. S. A.

BRUNNER SINCE 1906
REFRIGERATION
helps you serve better



AIR AND WATER COOLED MODELS
¼ HP. TO 25 HP.

BRUNNER SINCE 1906

They'll Do It Every Time . . . . By Jimmy Hatlo

VERMIN DOES LITTLE WORK ON THE JOB DURING THE DAY — IF ANY.
JIMMY HATLO
RACING TIPS
Thanx To IRVING M. GROSS, 2852 W. 19TH ST., BROOKLYN, N.Y.
HE TURNS ON THE STEAM ABOUT THE TIME EVERYBODY IS GOING HOME. PARTICULARLY THE BOSS.
J.B., I ADMIRE THAT YOUNG MAN'S SPIRIT. I ALWAYS SEE HIM STILL HARD AT WORK AFTER THE OTHERS HAVE LEFT. GIVE HIM A TEN DOLLAR RAISE..
2-14
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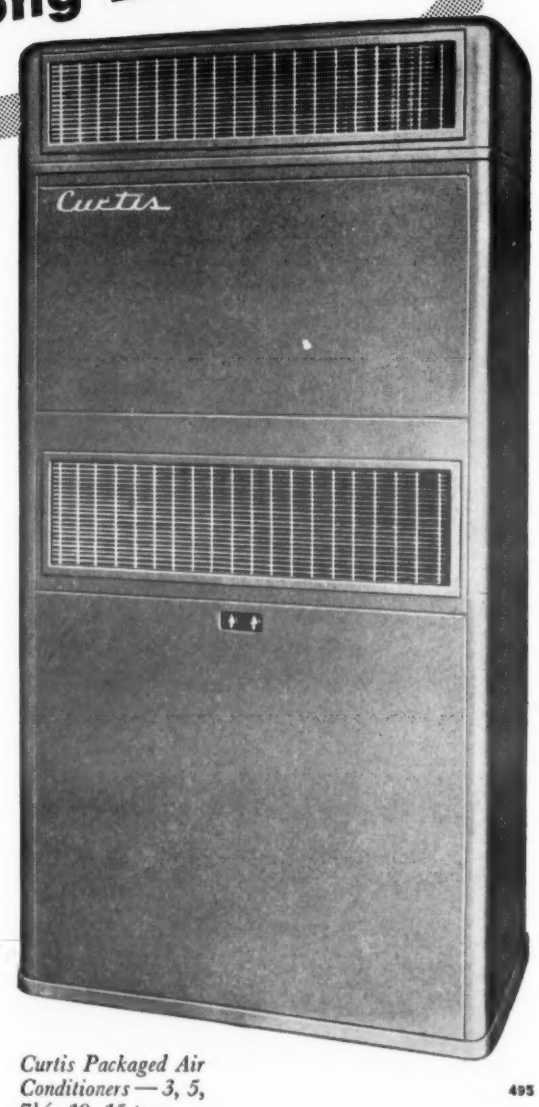
Out With Special Privileges--Revise the Wagner Act!

IN AIR CONDITIONING OR REFRIGERATION

CURTIS

PRECISION ENGINEERING

Assures Highest Efficiency, Economy, Long Life



Curtis Packaged Air Conditioners offer these advantages:

Compact, attractive units — 3, 5, 7½ and 15 tons
One day installation
Cool, dehumidify, circulate and filter air
Easily adapted for heating
Quiet, dependable operation
Exceptionally long, trouble-free life

Write to Curtis for full information on Curtis equipment for almost any air conditioning or refrigeration need.

Curtis Refrigeration Units — ½ to 30 H. P. air and water cooled.

Curtis Packaged Air Conditioners — 3, 5, 7½, 10, 15 tons.

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93 Years of Successful Manufacturing

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of CURTIS MANUFACTURING COMPANY

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AIR CONDITIONING AND REFRIGERATION News

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VOLUME 51, NO. 2, SERIAL NO. 947, MAY 12, 1947

Wanted: Specialty Salesmen

TODAY we're all going around in circles. In the refrigeration, air conditioning, and specialty appliance industries, demand still exceeds supply. Our present major problems have to do with raw materials, component parts, deliveries, and backlogs.

But this situation won't last long.

Already the soft-goods industries, and even the suddenly rich farmers, are experiencing buyer-resistance. Before we are prepared for it, there will be competition for consumer dollars in our lush business, too. What can we do to avoid being hurt when this moment arrives?

Well, as "Rock" Smith, widely-respected general manager of "Deepfreeze" puts it: "After six years of no salesmanship, we'll have to build our sales organizations all over again—and it won't be easy. But your idea of presenting the principles of specialty merchandising in terms of humor will undoubtedly ring the bell in a big way."

(He refers to the new book: "One Foot in the Door," written by the editor of AIR CONDITIONING & REFRIGERATION NEWS.) Similar sentiments about this book are expressed by R. C. Cosgrove, general manager of Crosley, who writes: "Your book is just what is needed to resurrect the old spirit of hustle and determination among specialty selling organizations."

"One Foot in the Door" is the first humorous book on merchandising ever published. But the humor is secondary, of course to the main purpose: *telling how to keep your sales volume high when the coming "recession" takes place.*

"One Foot in the Door" is the laugh-and-fact-packed story of Specialty Selling—the art which defies recessions and depressions. It takes you back through chuckling pages to the birth of the specialty merchandising art under that business genius, John H. Patterson of the National Cash Register Co., and it takes you forward—again with smiles and guffaws—to the shining future in store for good Americans who devote their lives to marketing, advertising, and selling.

It clearly delineates many ingenious, time-tested selling principles—and makes them easy to remember by associating these principles with humorous anecdotes.

It vigorously points up the job ahead for sales management—tells what, where, why, when, and how. And it does all this in an informal and amusing manner.

"One Foot in the Door" will go to work on your mental processes. For a few days (after you've read it) you'll tell the funny stories you've read. Gradually, these yarns will merge, in your subconscious mind, with the original how-to-merchandise ideas you have absorbed. The residue of fact will stay with you. You'll find yourself applying it to your sales planning and your every-day work.

If you are a veteran sales or advertising executive, you'll soon realize that "One Foot in the Door" has recharged your thinking . . . cleared away doubts . . . suggested answers to a tough problem or two . . . recalled methods that were successful before and will be again (because they're fundamental).

And if you are a rising, ambitious young man, you'll profit from "One Foot in the Door," too. For it distills the experience of successful decades and successful promoters in one handy package . . . to use in furthering your own career.

Whether you are a veteran or a neophyte, you can laugh, learn, and profit from reading this unusual book. You'll declare the $3.00 price to be indeed modest after you've seen the book and dipped into it. Send your order for "One Foot in the Door" to 450 West Fort St., Detroit, today. The supply of this recession-insurance book is limited. Be among the first to get it!

11 Open Refrigerated Cases Help Market Nearly Double Its $3,000 Weekly Volume

ELMONTE, Calif.—By placing all produce on a refrigerated, self-service basis, employing 11 open refrigerated cases, Crawford's Village Store, Elmonte, has elevated average weekly volume from $3,000 to between $5,000 and $5,700 per week.

This outstanding increase is due to "streamlining" produce operations all down the line, according to Sid Orr, produce buyer and supervisor for the Village stores. Located in a wage-earner district near Los Angeles, the Elmonte store has eliminated every drawback to successful produce merchandising, and eventually plans to go into full-scale prepackaging as "the next step up."

Mr. Orr credits the astonishing growth of vegetable and fruit sales to careful receiving, storing, washing, culling and display of the entire volume, all under refrigeration all the way.

"We have tested every type of display, beginning with the wet-spray method of keeping vegetables eye-appealing, and ending up with self-service refrigeration," he pointed out.

"We started out with two open refrigerated cases each in five stores, and found results so startling that it was determined to transfer our major store entirely to refrigerated display. We now have 11 full-size cases, all available for produce, and show only dry items, such as potatoes, oranges, lemons, limes, watermelons, etc., on the center gondolas."

LESS SHRINKAGE, BETTER LOOKING

Refrigerated display has accomplished several things for the store, according to Mr. Orr. The first is to cut shrinkage to a negligible factor, second to sell more merchandise due to better appearance of the goods, and lastly, to make it possible to order in larger volumes, with the security that refrigeration will keep the produce fresh and appealing.

"Refrigerated produce sells better because there is no limp celery, limp lettuce leaves, discoloration, etc., to contend with," Mr. Orr said. "All of our vegetables feel fresh and *are* fresh. Our customers tell us that our produce simply looks more attractive when fresh and cold and they always see it at its best appearance."

Mr. Orrs' produce handling system begins with receipt at a large wash rack room at the rear of the store. All produce as received is checked over, and culled immediately. That which passes inspection goes on to the huge wash rack, 40 ft. long, which consists of three full-size bathtubs, mounted on a galvanized metal drainboard, 5 ft. above the floor.

Other facilities include a metal drain shelf above the bathtubs, duck boards for employes, and an elevated rack for use of employes where it is necessary to reach deeper into the three porcelain tubs.

One full-time man handles the entire wash job, using spray nozzles, as well as the tub taps, washing every bit of produce within a few minutes after receipt. Convenient lift-top garbage recepticles are stationed between the tubs to keep the pre-washing room clean and neat.

PRE-COOLED AT 40° F.

After pre-washing, the vegetables are loaded onto hand trucks and are pushed into the pre-cooler, which is a 20 x 14 ft. redwood walk-in cooler, maintained constantly at 40° F.

Mr. Orr has found through experimentation that 35° F., the original temperature contemplated, is too cold, and will cause the produce to wilt more rapidly after the customer has carried it home. The circulating blower system keeps all produce at 40° F. until needed.

Displays in the refrigerated sales cases are based on an "estimated inventory" which is taken every night, to determine how much of each type of produce is needed, on what the market is over-stocked, and what to lay special merchandising emphasis upon.

A complete cost inventory is taken each week, as a precautionary check. All overstocked items are marked down for week-end selling, while those which have sold more rapidly than anticipated are bolstered by ample supplies in the walk-in cooler.

Produce after being pre-cooled for a minimum of 12 hours is trundled up to the 11 Hussmann-Ligonier refrigerated self-service units early in the morning, and is kept at 40° as well here.

Use of the self-service refrigerators has benefitted not only with green vegetables, but in selling additional fruit and dry produce, according to Mr. Orr. As an example, he compared ledger pages from March, 1944, and March, 1947.

Sales for one week in March, 1944, were $2,887, as compared to $5,738 in March, 1947. All of this was accomplished with little or no population increase, according to Mr. Orr.

ALL CASES CLEANED DAILY

The 12 self-service cases which make up the department (one of them is nearly always used for a specialty such as frozen foods, beer, etc.) are cleaned daily with an ammonia wiping compound, and are checked each week for operating efficiency.

Only a few prepackaged produce items are being sold at present, the Village store preferring to let the food brokers take care of packaging. Eventually, Mr. Orr plans to prepackage every item in cellophane, paper, cardboard cartons, etc. Potatoes, grapefruit, oranges, lemons, apples, etc., have already been prepackaged successfully.

Shipments of Porcelain Enamel Goods Drop 10%

PITTSBURGH—Although the dollar value of shipments of porcelain enameled products for February, 1947, showed a 10% drop from this year's January totals, the figure was 260% of that reported for February, 1945, and 160% of shipment values for the same month in 1946, according to a statement issued by the Porcelain Enamel Institute, Washington, D. C.

The month's shipment values for refrigerator, stove, and washing machine parts, not including parts produced and assembled into completed end products, was 230% of the same totals for February, 1946; table tops, kitchen cabinets and breakfast and dinette sets showed an increase of $222,420 over February, 1946.

Speed-Freeze

AN OUTSTANDING FROZEN FOOD CABINET...

PROVEN BY PERFORMANCE!

20 cubic feet, self contained model

The recognized superiority of all IDEAL "Speed-Freeze" products has created nation-wide confidence and distributor preference for this outstanding frozen food cabinet.

For Speed-Freeze cabinets are designed, engineered and built to render many years of extraordinary service, to insure maximum operating efficiency.

Manufactured to the highest standards, the Speed-Freeze line is RIGHT in quality, RIGHT in price . . . and approaches the fastest cooling known in the art of refrigeration. For additional information, write us today.

Proven by Performance

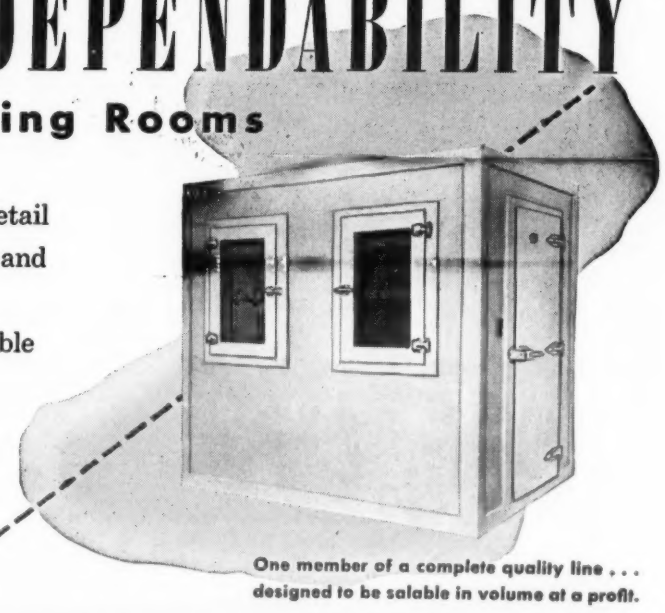
IDEAL Speed-Freeze PRODUCTS

IDEAL COOLER CORP. 2953 EASTON AVE. ST. LOUIS 6, MO.

CONSTANT DEPENDABILITY

in Walk-in Cooling Rooms

Because they are well-built in every detail and equipped with balanced coils and condensing units, they assure market operators of thoroughly dependable performance in the storage of perishables.



One member of a complete quality line . . . designed to be salable in volume at a profit.

SHERER

COMMERCIAL REFRIGERATORS

SHERER-GILLETT CO., Marshall, Michigan

VEGETAIRES • DAIRY CASES • REACH-IN REFRIGERATORS • WALK-IN COOLING ROOMS • MEAT & DELICATESSEN DISPLAY CASES •

ARE YOU PAYING TOO MUCH FOR TOP-GRADE INSULATION?

If you haven't heard about the completely new and revolutionary method of fireproof refrigeration construction developed by Gold Bond engineers—chances are you're paying *much* too much! Important, too, this new method of using Zerocel Insulation means much more than just big savings over old fashioned methods. It insures greater efficiency and permanence.

Zerocel installed with metal lath, channels, and Portland cement plaster replaces old-style construction methods using board forms of insulation and provides stronger walls, ceilings (that won't fall down), and a better looking finish. With this construction, condensation does not occur in the insulation.

- Fireproof
- Will not absorb moisture
- Odorless
- Will not settle
- Immune to fungus, rot and decay
- Vermin-repellent
- Easy to cut with a knife

GOLD BOND ZEROCEL INSULATION

This versatile method, a development of National Gypsum Company's 20 years' experience in the construction industry, applies equally well to locker plant, cold storage warehouse, and processing plant problems. Find out all about this new method today! Fill in the coupon below and mail to Industrial Division, National Gypsum Company, Buffalo 2, N. Y.

SEND FOR FREE BOOKLET TODAY

National Gypsum Company,
Buffalo 2, N. Y.

Gentlemen:

Please send me a FREE copy of the new Gold Bond Zerocel Booklet, "Fireproof Refrigeration Construction." A-5

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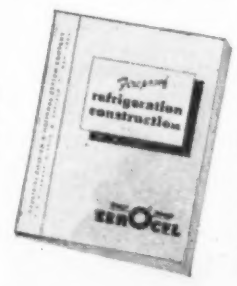
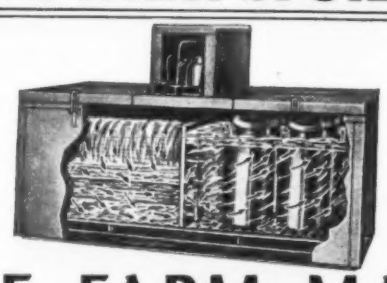


WILSON SELF-CONTAINED AUTOMATIC HIGH WATER LEVEL ZERO-FLOW

STOPS MILK SPOILAGE

COOLS THE DANGER ZONE FAST



Wilson ZERO-FLOW MODEL ZF8 HX50

Packaged-Unit Milk Cooler
Sizes from 4- to 24-can capacity

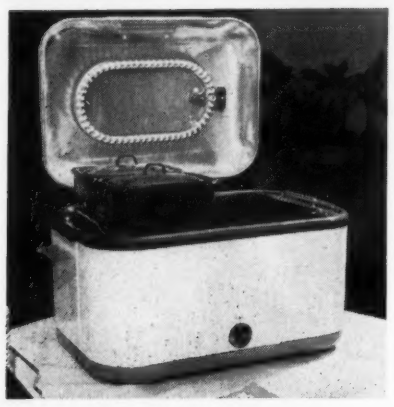
TO CAPTURE AND HOLD THE FARM MARKET

Specify Genuine "Refrigeration by Wilson"

• FARM MILK COOLERS • FARM FREEZERS • FARM REACH-IN REFRIGERATORS • FARM WALK-IN REFRIGERATORS

For Franchise Information, Address Dept. 11 WILSON REFRIGERATION, INC., Smyrna, Delaware

What's New



Proctor Roast-Or-Grille

* * *

Proctor 'Roast-Or-Grille' Features Broiler In Lid

NEW YORK CITY — The new Proctor "Roast-Or-Grille," a thermostatically controlled portable electric oven with the unique feature of a broiler in the lid, has just been introduced.

Designed in baked white enamel and chromium with gray acid-resisting inset pan and three piece acid-resisting black enamel pan set, its capacity is 18 quarts liquid measure. It will roast meats and fowl up to and including a 20 lb. turkey. The complete combination will retail at $39.95 including federal excise tax.

The broiler in the lid, claimed to be an exclusive feature in Proctor roasters, operates on both alternating and direct current. It is easily inserted or removed from the lid.

Specifications of the new product are as follows: oven 1,320 watts, broiler 1,500 watts, balanced heating element around all sides and in bottom, glass wool insulation, alternating current in oven, a.c.-d.c. in broiler. The roaster lid is self-basting and the broiler self-cleaning.

New Tenney Unit Cooler Permits Easy Servicing

NEWARK, N. J.—New water defrost unit coolers for low temperature applications, have been introduced by Tenney Engineering, Inc.

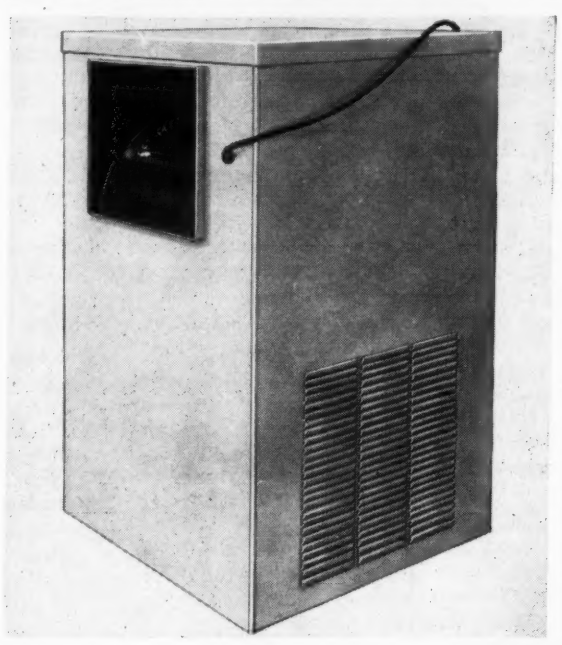
This new unit cooler can be defrosted in a few minutes by anyone, using ordinary tap water. It is so designed that complicated procedures in servicing have been eliminated, the company declares. Installation is simplified through the use of a few standard and easily obtained components.

The unit cooler is made in three sizes in the range from a capacity of 4,400 B.t.u. per hour to 14,400 B.t.u. per hour at 15° temperature difference. The smallest unit occupies a space approximately 19 x 19 x 20 in. and the largest 23 x 43 x 20 in.

Each unit is equipped with adjustable louvres, standard IPS water connections, and a Tenney TS-1 thermostatic expansion valve.

Polaire Unit Utilizes 'Indian Blanket' Cooling Theory

PHOENIX, Ariz.—Polaire—an air cooler consisting of a sheet steel cabinet containing a blower fan, a revolving pad of aspen excelsior, a ⅓-hp. motor, and a water reservoir—has recently been introduced by the Polaire Cooler Corp. here.



Operating on the old Indian blanket theory of cooling by evaporation, the excelsior pad revolves slowly through the water, keeping constantly wet. The blower draws the hot air through the wet pad and discharges it directly into the window of the house.

The manufacturer claims this unit will reduce the temperature in a home several degrees, and requires very little attention as the bearings are oilless and the water supply is automatic. One design is now offered for a house with five or six rooms.

John Wilkes hot plate

* * *

Sales of John Wilkes Burner Pass 50,000 Mark

WILKES-BARRE, Pa. — General Aviation Equipment Co., Inc. here reports that sales of its new, two-burner John Wilkes hot plate have now passed the 50,000 mark.

Overall size of the plate, which retails for $13.15 including excise tax, is 20 x 10 x 4½ in. It is finished in white enamel baked on steel.

Each burner contains two 400-watt heating units equipped with switches for high and medium heats. The burners can be used separately or together.

According to the company, the plate operates on any a.c. or d.c. outlet and is provided with a 6-ft. cord.

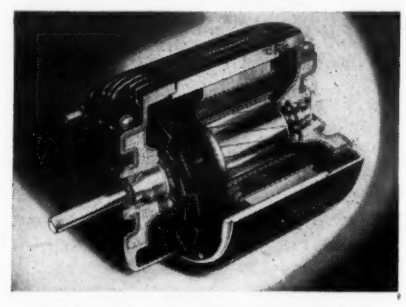
Advantages cited include quick-cooking heat, postwar styling, all-metal construction, economical operation, and ease of cleaning. Pointing out that the plate harmonizes with any modern kitchen setting, the firm suggests its use as a supplement to cooking facilities.

Several other appliances were scheduled to be produced under the John Wilkes trade-mark.

Redmond Adds Model To Its Small Motor Line

OWOSSO, Mich.—A new 1/20 hp., 4-pole shaded pole, totally enclosed a.c. motor, designed for continuous fan duty at 1,500 r.p.m., is a recent addition to a line of low-range, fractional horsepower motors being manufactured by the Redmond Co., Inc., of Owosso.

Sold under the trade-name "Micro-Motors," these new units have 2 square inches of bearing surfaces with individually fitted bearings, spaced 5 in. overall and 6 cu. in. total volume in oil reservoirs.



Redmond 1/20 hp. Micromotor

Circulating lubrication allows continuous operation in any position for unlimited periods. Other features are silent thrust washers, and flush-weld precision skewed rotor.

New Peerless Ice-Cube Maker Introduced In 4 Styles

CHICAGO—Peerless of America is introducing a new ice cube maker in four different styles.

(Photograph by Austin Jones, Kerotest Mfg. Co.)

The four styles are (1) a normal-duty cube maker; (2) heavy-duty cube maker; (3) snap-out tray cube maker; (4) finned cube makers with decorative fronts.

These new Peerless fast-freezing cube makers are constructed of heavy aluminum and copper tubing. The tubing is in the form of a continuous coil, inserted in each shelf.

The cube makers can be had in many different sizes and styles and are particularly adapted to applications in hotels, restaurants, taverns, hospitals, boats, and trains.

Immediate Delivery!

FOOD SAVING BANK

Everyone is familiar with the amazing advantages of frozen foods—the convenience and economy—and buyers are waiting for an opportunity to buy a Food Saving Bank. All right, Dealers—they're here!

SPECIFICATIONS

- ★ More than FOUR cubic feet storage capacity.
- ★ Kitchen equipment size—36 x 25 x 29.
- ★ Work table top.
- ★ All spotless white enamel, inside and out, with chrome band.
- ★ 5 degrees below zero to zero—adequate to hold or freeze fresh foods.
- ★ Surplus refrigeration power.
- ★ Copelamatic hermetic compressor.
- ★ LOW power operating cost.
- ★ Insulated with Styrofoam top and bottom—rubber to rubber seal.

It's New... It's Ready!

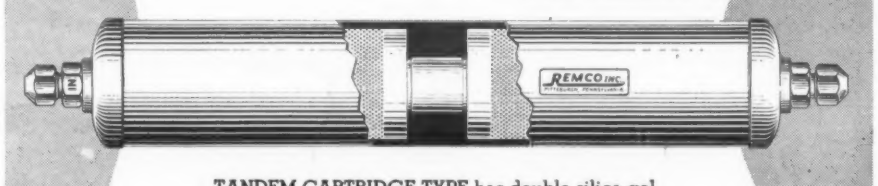
Yes—it's NEW, but Housewives know the Food Saving Bank! They want it—it's their own idea of what the home frozen storage locker should be. Housewives helped design the Food Saving Bank by collaborating with both Frozen Food Locker Operators and the Nation's Foremost Engineers!

More important—it's READY, ready for the Housewives who want it because it's their IDEAL!

I. R. ROZETT & ASSOCIATES
2423 WEST DIVISION STREET
CHICAGO 22, ILLINOIS

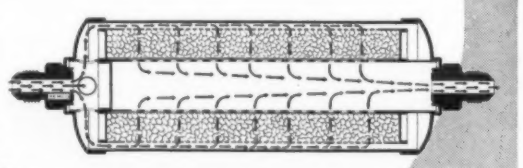
REMCO HEAVY-DUTY "CROSS-FLO" DRIER-FILTERS AND FILTERS

SINGLE CARTRIDGE TYPE — 18 cu. in. silica gel; 34 sq. in. course-filter surface; 14 sq. in. fine-filter surface — 4½ sq. in. effective flow area—sizes ¼", ⅜" and ½" SAE flare. (Also with wool filter element instead of drying agent). Rugged and attractively finished. A truly HEAVY-DUTY commercial Drier-Filter.



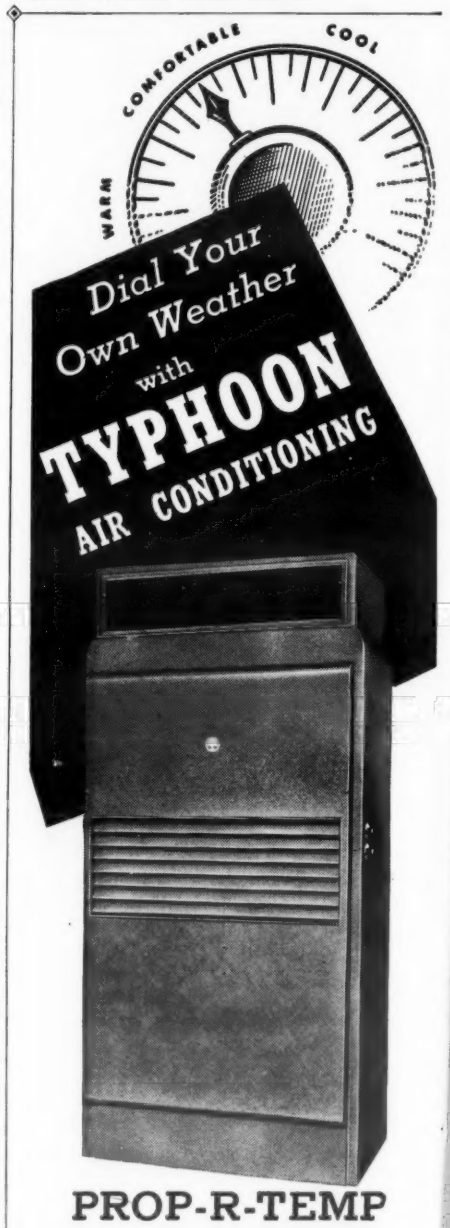
TANDEM CARTRIDGE TYPE has double silica gel, filter capacity and flow area for larger, dirtier, wetter jobs. Sizes ⅜", ½", ⅝" and ¾" SAE flare. Supplied with 2 drier-filter cartridges, 2 filter cartridges or combination of 1 drier-filter and 1 filter cartridge. Handles big jobs with capacity to spare.

UNIQUE "CROSS-FLO" DESIGN eliminates roiling, dusting and packing of drying agent, which eliminates pressure drop, clogging, poor refrigerant control performance and expensive call backs—permits installation in liquid line, suction line or between refrigerant control and evaporator.



No. 3

ASK YOUR WHOLESALER . . . OR WRITE
REMCO, INC. 49th Street & A.V.R.R. Pittsburgh 1, Pa.



PROP-R-TEMP

SELF-CONTAINED UNITS
3-Ton, 5-Ton, 7-Ton

PAY OFF WHEN THE GOING IS TOUGH

These rugged, oversized units are built to give service under the most trying conditions.

When the water supply is less than normal, the oversized condenser will still keep head pressures within bounds and the machine will keep plugging along, turning in a beautiful job of air conditioning.

The big cooling coil and every other oversized part gives assurance that this TYPHOON unit, year after year, will deliver 12,000 BTU's of actual air conditioning performance for every ton of rating.

This means a maximum of satisfaction for your customers and the very minimum of service headaches for you.

Write for further information and inquire if your dealer territory is still open.

Dept. 212
TYPHOON AIR CONDITIONING CO., INC.
Division of Ice Air Conditioning Co., Inc.
794 Union Street Brooklyn 15, N.Y.

Editor's Note: On this page are additional on-the-spot descriptions of exhibits written by C. Dale Mericle, associate editor of the NEWS, who covered the first Western Refrigeration Industry Exposition out on the West Coast.

Russell Sales Puts 10-Ton Condenser on Exhibition

Biggest item at the Russell Sales Co. (Los Angeles) display was a 10-ton Baltimore Aircoil evaporative condenser, but the large booth was devoted to showing products of the various manufacturers for which the firm is manufacturers' representative here.

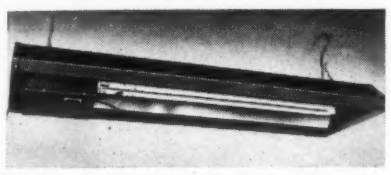
Besides Baltimore, these are American Coil, Ansul Chemical Co., Arlington Seals, Chicago-Wilcox Mfg. Co., Electrimatic Division of Simoniz Co., and Heat-X-Changer Co.

Sterilaire Radiating Lamp Kills Food, Air Bacteria

Sterilaire, an ultra-violet radiating unit for the control of bacteria in the air and bacteria and mold on foods, was shown at the Western Refrigeration Industry Exposition here by its manufacturer, Ultra Violet Products, Inc., Los Angeles.

Two types of the self-contained unit are produced in three sizes. Both the RHUV model for refrigerated areas and the HUV model for normal-temperature areas are available with 36, 48, or 60 in. tubing.

Company representatives pointed out these construction features of the RHUV Sterilaire: hairpin tubes hand-made by glass blowers, a special warming device to keep mercury



vapor at its best operating temperature, and water-impervious insulating material in the hood plus a special spectral-finish aluminum reflector to sustain the proper temperature.

The HUV unit has the same type of tube, but not the insulation or warming device. Outside surfaces of both are wrinkle-finished.

The lamp is equipped with loops so that it can be hung from hooks in the wall or ceiling and with brackets which permit direct attachment to the ceiling. An attached cord can be plugged into any light socket.

One of the main operational features cited for Sterilaire is that more than 80% of its radiation is concentrated between 2400 and 2800 Angstrom units. This band of ultra-violet wave lengths produces maximum bactericidal efficiency, it is claimed.

"Sterilaire radiation is concentrated in this bacteria-killing band by the balancing of an electronic discharge through mercury vapor in a vacuum," the company explains. "The invisible ultra-violet rays are filtered through special glass tubing which screens out undesirable wave lengths."

According to the manufacturer, the RHUV Sterilaire prevents the mold which usually starts at temperatures below 38° in the presence of high humidities and also the slime usually present when box temperatures get above 40° with high humidity. This action is said to reduce trim losses and to permit sales of "trim" as ground meat.

The company declares its unit fully protects meat at temperatures between 38° and 42°. By permitting higher box temperature and humidity, it is asserted, Sterilaire helps age meat safely and properly, retards shrinkage, reduces operating cost, and increases employe comfort.

The HUV Sterilaire is described as useful in reducing the spread of communicable diseases in public gathering places. In operating rooms, it is said to create sterile air conditions and thereby speed the healing of wounds and shorten convalescence periods.

Prices of the various sizes are listed as follows:

RHUV Models for Refrigerated Areas

	Unit Complete	Tube Only
Size 30 with 60" tubing	$67.50	$21.50
Size 24 with 48" tubing	60.00	19.00
Size 18 with 36" tubing	55.00	16.50

HUV Models for Normal Temperature Areas

	Unit Complete	Tube Only
Size 30 with 60" tubing	$50.00	$20.00
Size 24 with 48" tubing	45.00	17.50
Size 18 with 36" tubing	40.00	15.00

Vico Refrigerator Shows Factory-Assembled Walk-In

First-time showing of its self-contained, factory-assembled walk-in freezer and storage room marked the display of Vico Refrigerator & Mfg. Co. with headquarters in Los Angeles and factory in Eagle Rock, Calif.

Measuring 6 ft. by 6½ ft. by 6½ ft., this walk-in is constructed in two sections and can be assembled with its eight bolts in 45 minutes, it is claimed. It is powered by a ¾-hp. condensing unit and employs four Dole plates. Insulation is 6 in. of glass fiber.

Also shown by Vico was a 6 ft. by 6 ft. by 6 ft. 8 in. combination reach-in, walk-in with three three-quarter length reach-in doors; a 6-ft. dry beverage cooler with self-contained units; and a 30-case Coca Cola-beer dry beverage cooler of stainless steel construction for remote installations.

Westcott Specializes In Complete Water Treatment

The Ralph M. Westcott Co., Los Angeles, specializes in water treatment, both on a service and preventive maintenance contract basis, and also serves as distributor in southern California for Micromet water treatment in the refrigeration and air conditioning fields. Incidentally, 90% of the firm's work comes from refrigeration contractors.

A complete water treatment and control service is offered which begins with the chemical removal of scale, corrosion, rust, and sludge, and continues with regular monthly inspection, maintenance, and pre-treatment of water to minimize the formation of scale, growth of algae, and the precipitation of dissolved minerals, according to the company.

Denny Bros., Inc. Displays Various Commercial Cases

Manufacturer of custom-built commercial equipment and distributor for Minneapolis Showcase Co., Federal Refrigerator Mfg. Co., Royal Mfg. Co., and Osborne Register Co., Denny Bros., Inc. of Pasedena, Calif., featured these various lines at its booth.

Shown was a 6-ft. self-contained "Sterling, Jr." triple-duty display case as produced by Minneapolis Showcase; a 5-ft. Federal bakery and confectioners case (a sample model, incidentally, produced especially for this western show) a Federal single-duty meat case for remote installation; a Regal meat and bone saw, and an Osborn chopper and slicer.

Willis Exhibits Equipment For Servicing Sealed Units

Willis Refrigeration Service of Long Beach, Calif., rebuilder of all types of hermetic units, featured a completely reconditioned and refinished General Electric Monitor Top unit. Backdrop of the booth was covered with photographs depicting the special shop equipment designed for hermetic servicing.

Replacement check valve seats manufactured by the Willis firm for all models of Coldspot units, including hermetics were also shown.

Germicidal Ultra Violet Fixtures Shown by Shield

Sole distributor on the west coast for Sterilaire and Sanilite germicidal, ultra violet fixtures, the Shield Ultra Violet Engineering Co. of Los Angeles showed products of both lines, including ultra violet sterilizing equipment for barber and dentist use.

Plans for light manufacturing by the Shield company are now under way, it was announced, with the firm scheduling ultra violet fixtures for under-bar and toilet installations.

Stainless Steel Fountains, Cabinets Mark A & W Booth

Five and 6-cu. ft. stainless steel bob-tail soda fountains plus ice cream cabinets, also in stainless steel, comprised the display of A. & W. Sheet Metal Co.

The ice cream cabinets are so constructed as to follow the lines of the bob-tails, and both the fountains and the creamers have adjustable legs so they can be lined up even if the floor is uneven.

Farmers Best Buyers at Nebraska Appliance Show

NORFOLK, Neb.—Rural patrons, whose incomes are said to have reached an all time high last year and whose homes are rapidly being electrified, created the biggest demand for home appliances of all types at the Norfolk, Neb. Home Appliance Show, exhibiting dealers reported.

Home freezer cabinets were in fair demand, they said. They noted resistance, however, to the prices of air conditioners.

The show was staged here late in April by the Norfolk Junior Chamber of Commerce and attracted 6,500 visitors.

Metalloy Co. Turns Out Compound for Soldering

LOS ANGELES — Galvalloy, a soldering compound distributed by the Metalloy Products Co. here, can be used to tin magnesium and to repair corroded areas in degreasing tanks, the company has revealed.

Galvalloy is said to be an aluminum solder applied without flux.

When tinning magnesium, pure zinc, pot metal, or ordinary solder may be used as a filler or soldering agent, the company declared.

Galvalloy will withstand the corrosive action of degreasing tank vapors very satisfactorily, the company claimed. Repairs can be made on the tanks with only a welding torch and wire brush, it said.

EASY does it with this new Easload Appliance Truck! The entire weight of the load rests on big 10-inch rubber tired roller balanced wheels. Wheels lock in forward position for sliding truck under appliance. Then they slide back in balanced position to carry the load when you kick the handy foot pedal. Double ratchet cinches two 12-foot straps. Curved tubular handle slides over steps. Rubber frame protectors. Rubber covered axle nuts.

The Easload comes complete with 12-foot heavy webbing strap at $48.50, f.o.b. Los Angeles. Capacity 800 lbs. Weight 64 lbs.

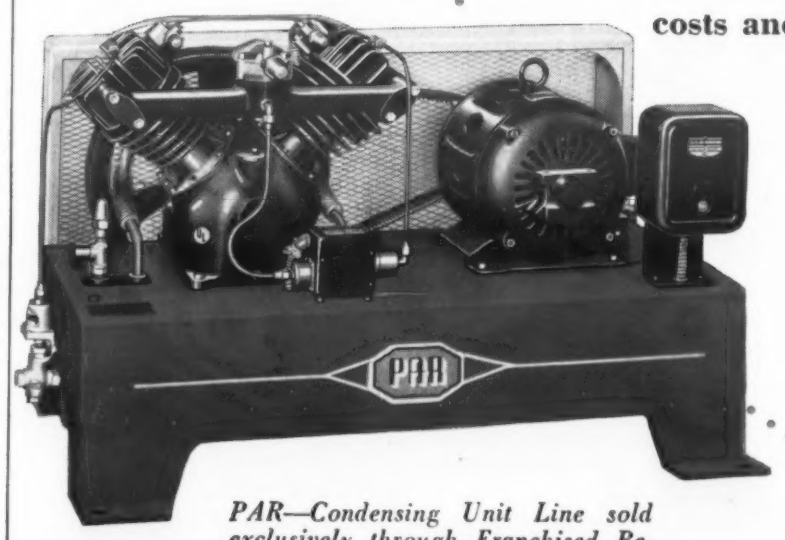
Immediate Delivery—Order Now

- EASY-GRIP CURVED HANDLES
- RUBBER COVERED UPRIGHTS AND CROSS BARS
- DOUBLE RATCHET STRAP CINCHER
- SMOOTH SURFACE SLIDES OVER STEPS—ON AND OFF DELIVERY TRUCKS
- ALL-WELDED TUBULAR STEEL FRAME
- QUICK RELEASE PEDAL LOCKS AND UNLOCKS LOADING OR UNLOADING POSITION
- 10 x 2.75 RUBBER TIRES
- RUBBER COVERED AXLE NUT
- WHEELS SLIDE BACKWARD TO CARRY THE LOAD
- RUBBER WHEELS ASSIST IN LOADING
- TOE PLATE COVERED WITH HEAVY CANVAS WEBBING

COLSON EQUIPMENT & SUPPLY CO.
1317 WILLOW STREET LOS ANGELES 13, CALIFORNIA

PAR REFRIGERATION UNITS

are designed and built in a wide range of models and sizes to give you dependable economical refrigeration. Air-cooled and water-cooled . . . close-coupled and heavy duty type . . . and in sizes from 1/6 hp to 5 hp. Regardless of your requirements, there's a Par unit for "tailored" installations that give lower operating costs and longer trouble-free service.



PAR—Condensing Unit Line sold exclusively through Franchised Refrigeration Equipment Wholesalers!

Ask your Par wholesaler about Par or write for illustrated Catalog R-98

. . . By Comparison—You'll Buy PAR

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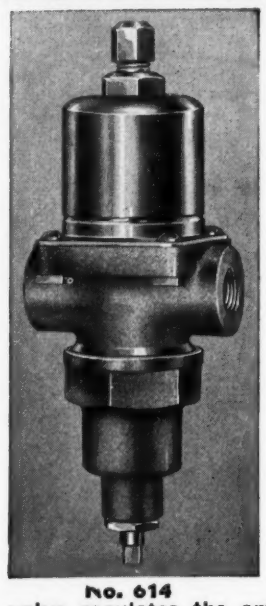
General Offices, Toledo 1 • Factory, Defiance, Ohio, U.S.A.

AMINCO
WATER REGULATING VALVE

Quiet •
No Chatter •
Practically friction free •
Maximum flow with minimum head pressure differential •



No. 614

Double Bellows Seat •
Removable Body Seat •
For all Refrigerants —except ammonia •
Standard connections 3/8"-1/2"-3/4" F.P.T. •
Pressure Controlled •

Aminco No. 614 water valve regulates the amount of water passing through water-cooled condensers. . . .

This valve is helping to keep systems in tip-top condition and because of its close control action it provides insurance of longer life for water-cooled condensers.

Sold, as always, through jobbing channels, it is an invaluable aid to the service-man concerned with keeping installations operating at full efficiency.

For more details see Bulletin No. 15.

AMERICAN INJECTOR COMPANY
1481 Fourteenth Avenue DETROIT 16, MICHIGAN

Van D. Clothier, 1015 E. 16th St., Los Angeles, Calif.
George I. Boone & Son, 741 G. M. Bldg., 1775 Broadway, New York 19, N. Y.
William H. Cody, 2nd Unit, 10th Floor, Santa Fe Bldg., Dallas, Texas
J. C. Battles, 504 Bondi Bldg., Galesburg, Ill.
Export: Borg-Warner International Corp., 310 S. Michigan Ave., Chicago, Ill.

Austin Co. 'Over-Head' Installation of Factory Air Conditioning Units Saves Vital Floor Space

CLEVELAND — The Austin Co., internationally noted for the many "controlled conditions" plants it has designed, engineered, and constructed, has come up with another research development—a new system for installing standard air conditioning and power distribution equipment in units predesigned to serve floor areas "of almost any size."

This "integrated unit-area system," the result of two years of research, is said to simplify the installation, use, and maintenance of such equipment in "controlled conditions" factories and to eliminate the need for custom-designed machinery.

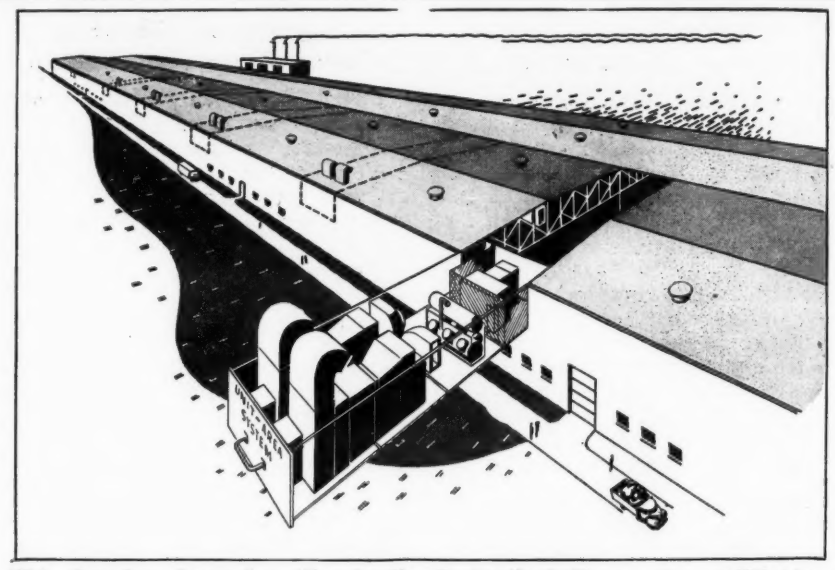
Here is how the system works, according to the company:

Platforms Fit Structure

"The equipment is properly balanced and arranged in standard units to fit neatly between two welded H-Section trusses of 60 ft. span or greater. Assembly is made on the floor on platforms which are so designed that when raised into position they become an integral part of the building structure."

It is pointed out that by placing the units in the otherwise unused space between roof trusses, neither valuable floor space nor pent houses are required.

The standard welded trusses developed by Austin "for flexibility of use" will be employed throughout plants applying the system. Extra weight sections will be specified in place of normal sizes for trusses carrying the equipment platforms, and they will be fabricated in standard truss jigs.



This drawing shows how the Austin Co. method fits an air conditioning assembly in between the 60-80 ft. span of an H-section truss.

"It is expected," the company said, "that this new concept of plant design will result in substantial savings in construction time, since air conditioning and power distribution equipment can be ordered before detailed construction drawings or specifications are even started. At the same time, maximum standardization of all mechanical equipment and accessibility of these facilities will simplify maintenance."

"Standardization," according to J. K. Gannett, Austin vice president and director of engineering and research, has been effected with respect to "basic designs," not to particular brands of equipment or systems of cooling. He said that standard manufactured units of various types can be incorporated without deviation from the basic standard and that Austin "does not specify any one make to the exclusion of others."

Plant Size Determines Unit

"When the areas are small, refrigeration units of the direct expansion type are used," he continued, "except where deep well water is available for cooling. In larger structures, the choice is made between the three available types of cooling in the light of particular conditions at the plant in question."

As for air cleaning equipment, the spokesman pointed out that the design permits the installation of any standard mechanical, electrical, or other filter, according to the needs of the individual plant.

Location of the units poses no maintenance problems in the minds of Austin engineers. Long experience in the construction of air conditioned buildings for a wide range of industries, and in which every conceivable location has been used for the installation of equipment has convinced them that "it is just as easy to service equipment on platforms between roof trusses as it is at floor level, in basement areas, in pent houses, or lean-tos around the perimeter of a plant."

Further, it is noted that "regardless of the number of units required there is complete duplication of equipment."

The system is pictured as suiting the needs "of a great variety of plant layouts involving 50,000 or 5,000,000 sq. ft. of floor space.

From 15,000 Sq. Ft. Up

"The minimum size in which this unit-area system is economically practical is about 15,000 sq. ft.," it is estimated.

According to Austin, its research division has developed plans applying the system to structures of 60, 70, and 80-ft. span, in units 240 ft. long, and the method is being used in principle in several of the ten "controlled conditions" buildings it now has under construction. These plants include facilities for printing and publishing industries; manufacture of electrical equipment, food, and pharmaceutical products; and for rubber, chemical, and petroleum research.

Coordinated System

Austin, which has been called "the nation's foremost building organization," combines design, engineering, and construction under one management. Under this integrated system, termed "The Austin Method," the company is said to have handled more than $1,000,000,000 worth of work, more than $600,000,000 of which was done during the last war.

The firm considers itself a pioneer in the development of the "controlled conditions" plant, which is defined as "one in which the principal conditions

(Concluded on next page)

a better room air conditioner takes office

The new Carrier Room Air Conditioner is the ruling favorite for every kind of office. Dentists, doctors, business executives like the quiet, efficient way it goes about supplying cool, bracing "weather" all summer long. They're making it a hot-weather must.

Everybody feels better, works better when this skilfully engineered air conditioning unit is on the job. It does more than cool air. It eliminates sticky humidity, keeps out dust and pollen, and rids the office of smoke and stale air. In winter, it circulates outside air without admitting wind, snow, rain, or dust.

There are other Carrier Room Air Conditioners for larger offices and for every room in the home. Men who enjoy refreshing weather at work want the same cool comfort in their living room, dining room and bedroom.

These Room Air Conditioners are designed and built with the same engineering and manufacturing skill that distinguish all Carrier products. They're volume leaders in Carrier's wide, year-round line of air conditioning and refrigeration equipment. Dealers and air conditioning contractors choose Carrier for continued profit. Ask about the Carrier franchise. Carrier Corporation, Syracuse, N. Y.

Carrier
air conditioning
refrigeration
industrial heating

USE Superior V-BELTS
•AS ORIGINAL EQUIPMENT• FOR ALL REPLACEMENTS

Here's why-

They have Eye Appeal—they look as good as they really are.

They're precision made for vibrationless drive—therefore they run truer, hold their shape, last longer.

They contain no reclaimed rubber. Their double jacket is synthetic rubber covered to resist oil and grease.

Their heavy duty cable cords are gum-dipped which makes for long life and flexibility.

They are made in a full range of sizes for every cooling or refrigerating fractional horsepower need. Write today for complete information about The Superior V-Belt line.

Superior in Quality - as well as name
Builders of V Belts since 1933

SUPERIOR RUBBER PRODUCTS MFG. CO.
OFFICES — 4041 RIDGE AVE., PHILADELPHIA 29, PA.
PLANTS IN PHILADELPHIA, PA. AND EGG HARBOR, N. J.

Austin Co. Method--

(Concluded from preceding page)

affecting efficient operation—such as light, temperature, and humidity—are under full control and independent of the natural sources." It has been building this type since 1930 when it designed and constructed the "world's first 'controlled conditions' plant" for the Simonds Saw & Steel Co., Fitchburg, Mass.

Of the many factories, airports, and office buildings Austin has designed, built, and equipped, perhaps the most notable is Consolidated-Vultee's Fort Worth plant. This wartime project has been described as "the world's outstanding example of controlled-conditions design" and the "world's largest air conditioned industrial building."

In cooperation with Truscon and Owens-Corning, Austin developed steel and Fiberglas "breathing" walls and roofs for this and other plants as an aid to economical air conditioning. Engineers at the Fort Worth plant figured the operating cost of air conditioning was $1.32 per man per month, with heat transfer coefficients of .07 B.t.u. per sq. ft. for walls and .06 B.t.u. for the roof.

This plant's total refrigerating capacity was given as 12,000 tons. Four gas-fired boilers of 100,000 lbs. of steam per hour capacity, were installed to serve heating and process functions and drive the refrigerating compressors.

The plant contains 3,800,000 sq. ft. of floor space. Its largest unit, the assembly building, is 4,000 ft. long and 320 ft. wide.

In addition to light, temperature, and humidity, other conditions which Austin considers in designing buildings are reduction in noise, germicidal treatment of air, proper ventilation, and elimination of odors and dust.

Hotel Niagara Installation Will Cost Nearly $10,000

NIAGARA FALLS, N. Y. — The Terrace and Indian rooms of Hotel Niagara are being air conditioned, according to L. H. Vanderslice, manager. The ducts for the unit have been installed and a 20-hp. motor is expected shortly. The job will cost about $10,000.

Packaged Carrier Unit Helps Jewelry Store Regain Good-Will

80% Atmosphere Aids In Fitting New Watch Crystals

KANSAS CITY, Mo.—A 5-ton Carrier package air conditioning unit is helping Helzberg's, jewelry store at 32nd and Proost Aves. here, to rebuild good-will lost by slow service and often poor workmanship in watch repairs during the war.

The store has set out on a 4-point program to offset the ill-will of customers who were forced to wait months for watch repair service during the conflict. The first step was to put on a staff of 10 expert watchmakers, eight of whom work in an air conditioned room.

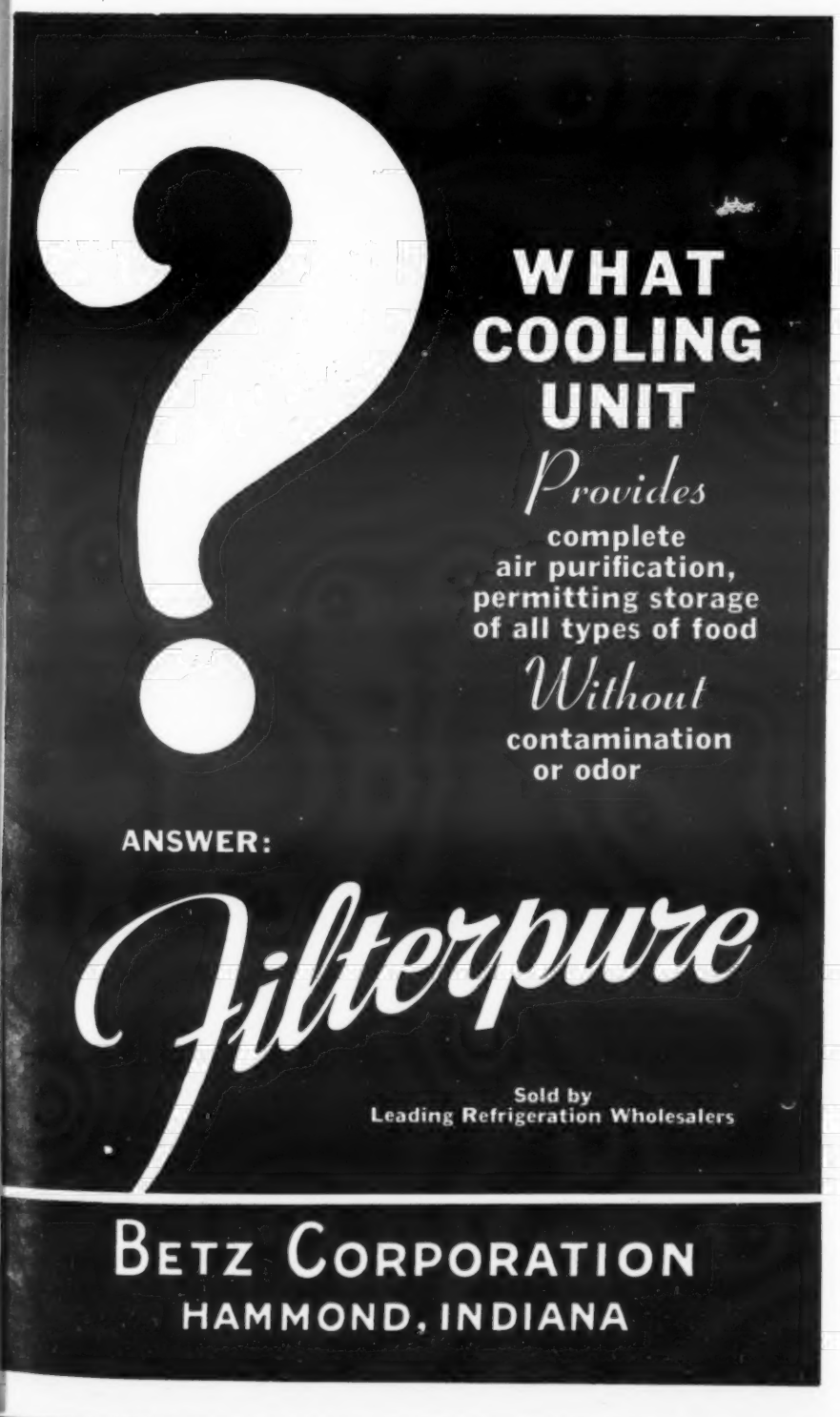
These watchmakers, who automatically refinish every watch case, and replace all crystals whether the customer ordered it or not, work in an atmosphere kept to a comfortable 80% the year around by the 5-ton Carrier unit. After much experimentation, the jewelry store management found that this temperature prevented expanding of tiny metal screws, balance staffs, gear wheels, etc., used in watch repair, and thus speeded up repair work by as much as 50%. The store is offering complete watch repairs with from 7 to 10 days delivery in place of the 3 to 6 months which was standard a year ago.

Most unusual feature of the watch repair program is a separate, air conditioned room for polishing, and for fitting new crystals. The entire watch crystal stock is kept in a small 7 x 8 ft. air conditioned room, with a duct to the package unit. The crystals are fitted under these cool conditions into cases brought from the higher-temperature case polishing room—and the natural expansion of the metal makes it much more simple to fit a crystal which will be locked in place tightly when the glass expands under normal temperatures.

The store spends 50 cents per watch at an average for new crystals and case refinishing—but has built up a volume of 1,200 watches per month through incorporating air conditioning into this novel plan.

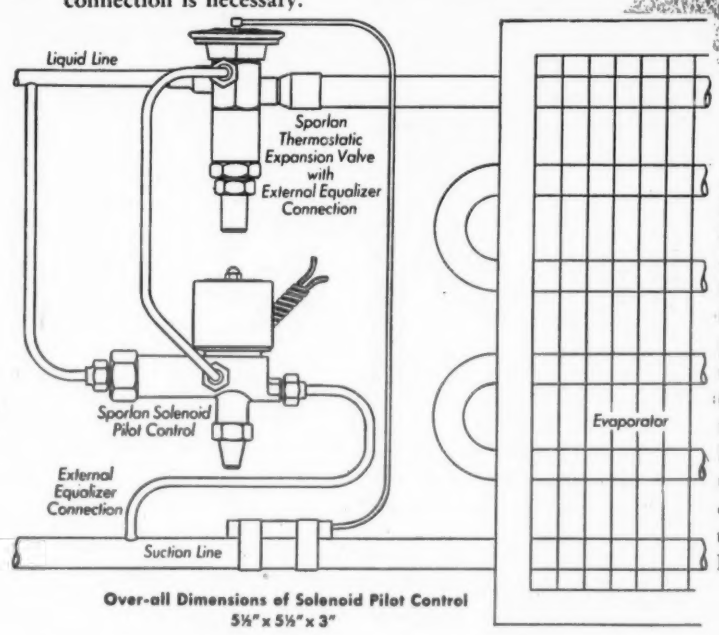
How Austin Setup Utilizes Space Otherwise Wasted

This photo taken at the new Douglas Aircraft plant in Oklahoma City shows how the air conditioning units are mounted on platforms above trusses yet readily accessible for servicing.



Save Money 3 Ways
by using the
SPORLAN SOLENOID PILOT CONTROL
for Positive Shut-Off of Liquid Lines!

1. A Sporlan Solenoid Pilot Control costs *less* than a large capacity Solenoid Valve.
2. The Sporlan Solenoid Pilot Control eliminates stocking a variety of large Solenoid Valves. The Sporlan Solenoid Pilot Control is made in only one size and can be used on any capacity job, no matter how big.
3. It's easier and cheaper to install a Sporlan Solenoid Pilot Control than a large Solenoid Valve. The Solenoid Pilot Control is installed in the external equalizer line of a Thermostatic Expansion Valve and only one additional ¼" connection is necessary.



Over-all Dimensions of Solenoid Pilot Control
5½" x 5½" x 3"

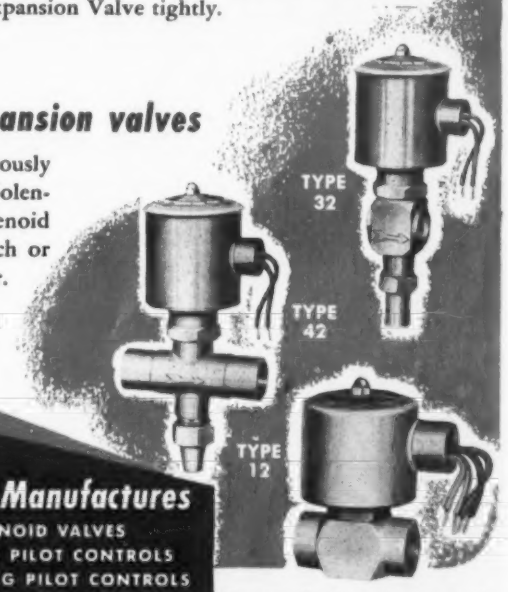
How the Sporlan Solenoid Pilot Control Works...

A very small amount of liquid refrigerant is bled from the liquid line through a fine mesh strainer and capillary tube to the equalizer connection. When the Solenoid Pilot Valve is open, the small leak is completely vented to the low side, allowing the true suction pressure to influence the Expansion Valve diaphragm in the usual manner and allowing the Expansion Valve to operate normally at full evaporator capacity. When the Solenoid Pilot Valve closes, liquid pressure builds up under the Expansion Valve diaphragm, overcoming the effect of the bulb pressure and the Expansion Valve spring closes the Expansion Valve tightly.

Any number and any size of thermostatic expansion valves may be connected to one pilot control, thus simultaneously controlling the action of all valves on one evaporator or entire plant. The Solenoid Pilot Control is used in exactly the same manner as a liquid line Solenoid Valve. Its coil is energized either through a thermostat, pressure switch or manual control or by connection across the compressor motor or starter.

Two wire control is used . . .

The expansion valves will be open when the pilot coil is energized and closed when de-energized in exactly the same manner as the conventional solenoid valve. When de-energized the leak from high to low side also stops. The pilot control may be applied to existing jobs merely by connecting with ¼" copper tubing and completing electrical connections.



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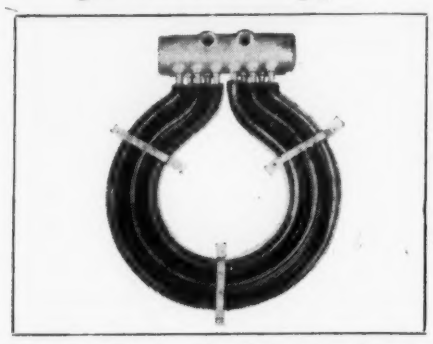

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Commercial Dealer Has Graded Scale Of Commissions For Sales, Collections

Editor's Note: This is the first part of a two-instalment article on the operation of a commercial refrigeration sales and service firm. This article describes how the firm is "departmentalized," how salesmen are paid, and how the service shop is equipped. Next instalment will describe methods and forms for inventory, billing, and bookkeeping.

By C. Dale Mericle

LONG BEACH, Calif.—Extensive shop equipment, a departmentalized operation, zoned and protected territories for its salesmen, and up-to-the minute bookkeeping are major features which characterize Neel's Refrigeration Co., a commercial dealership here.

The firm has been in operation since 1942 when it was founded by H. Neel and another chap. It started out as a service firm. Now it is a Frigidaire commercial dealership and also has franchises for Freezmaster frozen food display cabinets, and the soda fountain and restaurant fixtures produced locally by the A. & W. Sheet Metal Co.

For several years prior to 1942 Mr. Neel had been in the U. S. Navy, and when he received his medical discharge that year he joined up with a commercial refrigeration sales organization. Then came the "freeze" on equipment sales, so Mr. Neel and the firm's bookkeeper set up this service firm.

Besides Mr. Neel the present partners include H. L. "Tex" Graham, who handles all purchasing, and R. R. "Bob" Richards, sales manager. Other key men in the firm include Clyde Kernohan, accountant; W. E. Bartlett, service manager, and C. R. Neel, shop manager.

Much emphasis is placed on service by this firm, not only as a profit-making operation in itself, but to improve the sales of new and reconditioned commercial equipment.

"Service is the open door to sales," declares Mr. Neel, the founder, who also has great faith in the future for refrigeration in the west coast region, especially in his own area.

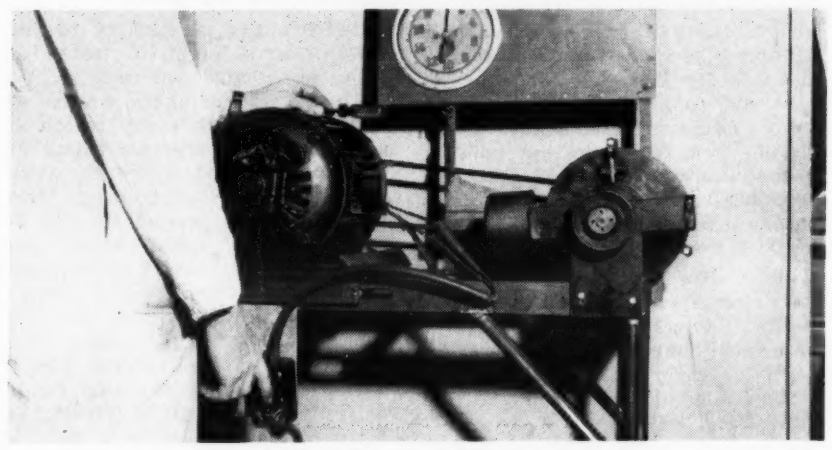
"We need refrigeration all the year around out here," he contends.

Servicemen are important in tipping off the sales department as to possible deals, points out Mr. Neel. They are well acquainted with the condition of the equipment being serviced, and may learn from the proprietor that he is considering replacement or additional refrigeration for his establishment.

No commission is paid to servicemen for these leads, however. One reason for this, he explains, is that the firm's salesmen work solely on a commission basis.

"Also, we pay our servicemen top wages, take out insurance policies for them on both life and accident and health, offer a hospitalization insurance program, provide them a generous car allowance, and supply uniform coveralls."

Partners in Neel's Refrigeration Co. are H. L. "Tex" Graham, R. R. "Bob" Richards, and H. Neel. Some of the methods they have found successful in operating a commercial refrigeration and service dealership are told in the accompanying article.



This Prony brake was developed by T. R. Henry, in charge of electric motors repairs at Neel's, to test re-built motors.

HOW SALESMEN ARE PAID

The five salesmen working for the firm are paid strictly on a commission. They have protected territories which give them a commission on any sale made in their territory whether they turned in the sale or if the customer merely walked in the office with the order. They receive greater commissions for their own sales, however. And there are bonuses for the individual salesmen when their monthly totals exceed certain established figures. It works like this:

On floor sales made without any assistance of the salesman, he gets a 5% commission for those going to his territory. Incidentally, there are no "open" territories.

A 10% commission is paid on the salesman's own deals.

When his own sales (less trade-in allowances) for a month exceed a certain figure, the commission on floor sales for that month is raised to 10% and the salesman receives also a 1% bonus on his own sales.

If the salesman's own sales should exceed a still higher figure in a month, the commissions on both his own and floor sales are raised to 12½%.

These commissions apply only to refrigeration sales. On fixtures the salesman receives 5% on his own sales and 2½% on floor sales.

COMMISSIONS ON COLLECTIONS

Although servicemen receive no payments for sales leads, they do get 2% on all collections they make on service calls. Not only does this serve as an excellent incentive for these men, but it has dropped the firm's accounts receivable from an average of $30,000 a month to between $8,000 and $10,000, says Mr. Kernohan, the accountant. This eliminates considerable bookkeeping.

Out in the shop there is quite a variety of equipment to perform the shop operations, including rebuilding electric motors, that are involved in a complete repair and rebuilding program.

(Continued on next page)

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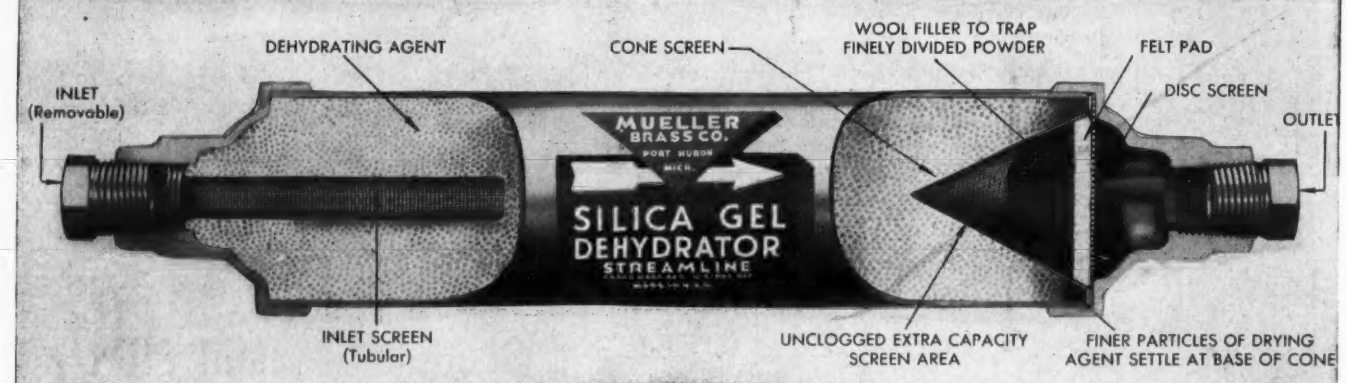

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When recharging our new Dehydrator, simply remove the inlet plug—back out the slotted inlet screen tube—shake out the exhausted agent, then replace with new.

In addition to this convenient feature (see illustration above) Mueller Brass Co. Filters and Driers are provided with the CONE SCREEN OUTLET, a specially designed filtering element that adds immeasurably to the life and efficiency of Driers and Filters.

Almost all crystalline dehydrating agents are subject to a certain amount of abrasion while a dehydrator is in service. Small portions of the dehydrating agent break down into very fine powder and crystals. Unless a well-designed filtering element is incorporated in a dehydrator, these fine crystals and powder have a tendency to clog the outlet filter, resulting in restriction to the flow of refrigerant.

With the MBCO. CONE SCREEN OUTLET, such finer crystals and powder are forced to the base of the cone, leaving the center and tip of the screen open to the free flow of refrigerant.

In adddition, the cone screen is filled with pure wool which traps such particles that are sufficiently fine to pass through the screen mesh.

Particular attention has been paid to screen areas in Mueller Brass Co. Filters and Dehydrators, so that each size permits efficient passage to the maximum refrigerant volume that is used in a particular size refrigerant line.

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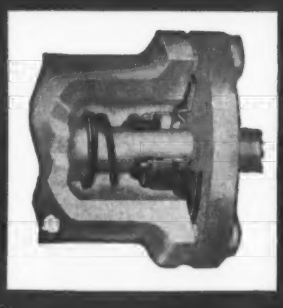

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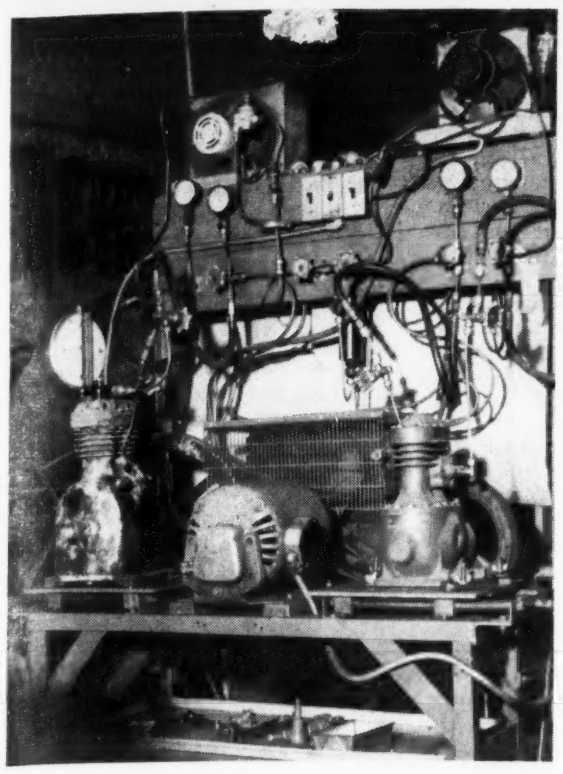
To Test Compressors Under Load Conditions



Compressor test stand in the Neel shop. Motor (mounted in the center) can furnish power for either of two compressors. Compressors are connected to blower-type evaporators (on top of stand) for load tests.

Special Shop Equipment Aids Commercial Firm

(Continued from preceding page)

There is, for example, a precision surface grinder for refinishing valve plates, which is claimed to perform all the finishing to renew the surface of a valve plate. With this machine a valve plate can be ground accurately in about 10 minutes, as compared with the several hours often involved in hand lapping.

One feature of this is a magnetic chuck which greatly simplifies fitting the plate in the machine. The plate is merely placed on the chuck, the switch turned on, and the plate is firmly held to the surface of the chuck by magnetic force.

MOTOR TESTING DEVICE

Another piece of shop equipment is the prony brake made by T. R. Henry, who is in charge of motor repairs. This device is employed to test motor horsepower and load capacity.

It consists of a weighted shaft driven by V-belts off the motor to be tested. An automobile clutch is employed, the discs being on the driven shaft between the two clutch plates which are connected in turn to a lever operating a scale. By adjusting the tension on the clutch the torque of the motor is indicated by the movement of the indicator on the scale. The motor is connected to an ammeter and voltmeter during this test.

Two test stands are employed for testing compressors and complete condensing units after rebuilding. The compressor test stand has a single motor which can drive two compressors simultaneously. Two blower coils are employed as evaporators, with the fans being arranged so they can be turned off or permitted to run, according to load requirements. There is a common condenser and receiver tank.

The test stand is fitted with hand throttling valves on both sets of liquid and suction lines, along with high pressure and compound gauges. To permit increasing the load if desired, the blower coils are fitted with automatic expansion valves.

For rapid filling of refrigerant drums the firm has set up a ¼-hp. "Freon-12" compressor connected to a three-pass Temprite condenser originally designed as a sweet water-carbonator cooler for soda fountain jobs. It incorporates a low side float. Only other control is a solenoid valve wired in series with the manual off-on switch used to start the unit. The solenoid is closed when the unit is not operating to keep the refrigerant from flowing into the sump tank.

Refrigerant is piped from 145-lb. drums through the three-pass cooler, where it is cooled by the "Freon-12" unit. Here it is cooled below the temperature of the supply cylinders and the resultant pressure difference forces the refrigerant into the small drum being charged. It requires a minute or less to fill a 25-lb. cylinder this way, according to "Tex" Graham.

DEHYDRATING OVENS BUILT

Two dehydrating ovens are employed in the shop. One, built recently, measures 42 in. wide, 70 in. long, and 67 in. high inside, and is of galvanized construction with 3 in. of "Nulite" (exploded granite) insulation. Four strip heaters controlled by a Robertshaw thermostat hold temperatures at 230° F. for dehydrating. Mounted atop the oven is a vacuum pump which is connected to units during the dehydrating process.

The other dehydrating oven uses the cabinet of an old Frigidaire 6 cu. ft. apartment house refrigerator. This is large enough to handle most compressors, motors, and other parts, including small condensing units. Two strip heaters are mounted inside, with a vacuum pump outside. Dehydrating temperature used here is also 230° F.

Every job that the company handles goes out equipped with a Silica Gel dehydrator and an Allen-Bradley overload protection switch on the motor. Neel's also makes its own heat exchangers for its jobs. For these ¼ or ⅜ in. soft copper tubing is simply run through ¾ or ⅞ in., respectively, hard drawn tubing.

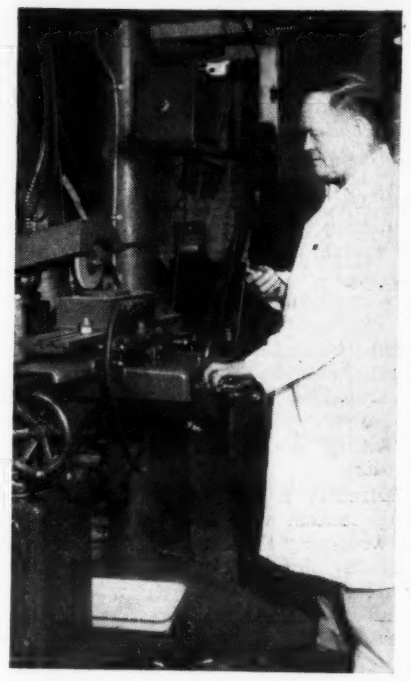
These are made on the job, their length varying with the job requirements. On some installations these heat exchangers extend all the way from the evaporator outlet to the condensing unit.

Water boosters for use with air-cooled condensing units are made in the shop for use on jobs where air cooling is not quite sufficient to handle the load. The booster consists of a double-tube coil made from approximately 50 ft. of ⅜ and ⅝ in. tubing which is connected into the system beyond the air-cooled condenser.

A solenoid water valve controlled by a high pressure switch starts water flowing through the booster coil when the refrigerant pressure on the system builds up too high, explains Mr. Graham.

(To Be Continued)

Grinder Is Time Saver



Oscar Lee finishes a "cut" of a compressor valve plate on the precision surface grinder, with which it is said to be possible to do the job in 10 minutes, compared with a couple of days work in hand-lapping.

West Coast Contractors Form Santa Clara Unit

SAN JOSE, Calif.—After several preliminary organization conferences, the Santa Clara Valley unit of the Refrigeration Contractors' Association was formed here recently with an initial membership of 30 active contractors.

R. H. Hartmann of San Jose was elected chairman of the executive committee. Other members of the executive committee are Harry M. Barnes and H. G. Beutel, both of San Jose, and H. B. Hunting, Watsonville.

Mr. Hartmann said the territory to be covered by the association would be both the Santa Clara and Salinas Valley as well as the Monterey Peninsula. The group will meet monthly.

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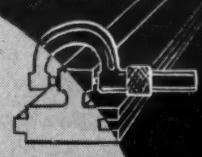

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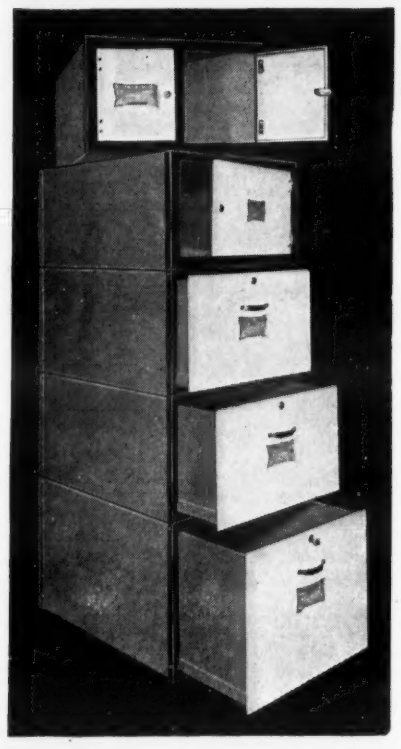

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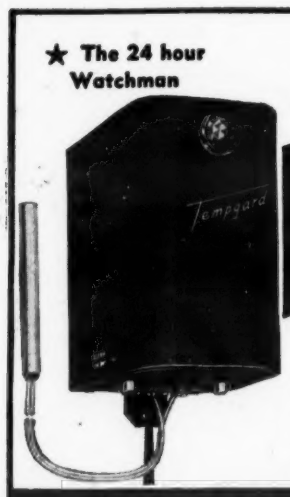

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Eastern Locker Groups Will Convene June 9-11

NEW YORK CITY—A meat-cutting contest among the various Eastern States locker associations will highlight the first annual Eastern States Frozen Food Locker Convention at the Hotel New Yorker, June 9-11.

Contestants from all participating and cooperating states in the East will compete in cutting up given meat parts of beef, pork, and lamb. There will be three contests, including the finals, and the contestants will be judged by meat experts who will rate them by points on the basis of speed, neatness, and cutting ability.

A new and novel feature in the program which has never before been attempted at any other convention, will be a complete poultry eviscerating line, showing the entire operation of killing, mechanical plucking, and the packaging of the poultry.

Directly following each meat cutting contest will be a demonstration of wrapping the meat cuts by experts utilizing different types of packaging materials. J. W. Witte will give a meat cutting demonstration and lecture at the close of the final meat cutting contest. The winner of the contest will receive a silver loving cup from the Eastern Frozen Food Locker Convention which will be inscribed "The Convention's Best Meat Cutter."

States are asked to enter their contestants immediately either to Keith J. Bauder, Fort Plain, N. Y., or to E. W. Williams, 82 Wall St., New York City.

The program of the three-day Convention includes two breakfast panels, headed by industry leaders, to discuss the procurement of commercial frozen foods and meats for locker plants. Sessions will also be devoted to locker plant problems, increasing profits in locker plant operations and the question of selling home freezers.

Officials of the National Frozen Food Locker Association will talk on various aspects of the locker plant industry, including locker plant modernization, and the growth of the national association. The convention program includes plans for a grand banquet under the management of Robert Evans of Utica, N. Y., and at which B. T. Babcock, noted agricultural authority, will be the main speaker.

All participating state locker associations will hold their annual meetings during the convention to avoid duplication of effort and of exhibiting locker plant equipment. There will be space available to accommodate 50 booths.

Participating states in the convention are: Connecticut, New Hampshire, New Jersey, New York, Pennsylvania, and Virginia and the cooperating states are: Delaware, Maine, Maryland, Massachusetts, Rhode Island, and Vermont.

Reservations for rooms at the convention may be made by visitors directly with the Hotel New Yorker.

More Vegetables Approved for Freezing By Wyoming U. Research Worker

LARAMIE, Wyo.—Additional varieties of vegetables have been tested and found satisfactory for storage in frozen food lockers by Miss Emma J. Thiessen, home economics research laboratory technician at the University of Wyoming here.

She pointed out that some varieties of vegetables are much more satisfactory than others for freezing, and that a frozen foods locker is not an outstanding investment unless the locker patron knows what to put in it.

Given the mark of approval for frozen storage were the following varieties of the more popular vegetables:

Bean—Commodore, Tender Green, Stringless Green Pod and Pencil Pod Wax.

Broccoli—Christmas Calabrese, Italian Green Sprouting.

Carrots—Denvers Half Long.

Cauliflower—Mt. Blanc.

Yellow Sweet Corn—Golden Bantam.

Peas—Laxton's Progress, Thomas Laxton, Hundred Fold, Little Marvel, Alderman.

Spinach—Viking, Nobel.

Swiss Chard—Fordhook, Lucullus.

Asparagus grown for freezing should be green, well colored and the stalks of moderate length with freedom from woodiness or fiber, Miss Thiessen stated.

Peppers should be uniform deep green or red with glossy skins, thick flesh, tender in texture, and have a high characteristic flavor, she added.

Picking Stone Fruits Just Before Peak of Maturity Recommended for Top Quality Frozen Product

—From "Adaptability to Freezing of Several California Stone Fruits," by Leonora A. Hohl, Division of Food Technology, University of California, presented at the first Frozen Food Exposition at San Francisco recently.

In any discussion of this type, the matter of proper maturity must also be brought up, since no variety will make an excellent product if it is not harvested at the proper stage.

If immature fruit is frozen it is usually sour, often bitter, and lacking in color and aroma. Browning and discoloration are more pronounced, and as a rule, the texture is poor, often rather rubbery. On the other hand, overripe mushy fruits become even more so when frozen and thawed, not to mention the difficulty of handling overripe easily bruised fruit in the freezing plant.

In general, the fruit for freezing should be riper than that harvested for canning. At the time of freezing it should be just right for eating out of hand. Allowance must also be made for continued maturation between the field and the processing line, so that the actual harvesting should be done one to two days before the fruit is "just right."

Uniformity of maturity is also of great importance and a very troublesome problem in both peaches and apricots. Few varieties ripen uniformly on the trees. Picking over the trees a number of times in order to obtain properly tree ripened fruit would be desirable from a quality standpoint, but is costly.

* * *

Our most important fruits for freezing are apricots, peaches, and nectarines. There is general agreement that the desirable varietal characteristics of these are:

(1) Uniform ripening, both with respect to the entire crop and to the parts of the individual fruit itself; (2) free stone; (3) pronounced characteristic color; (4) firm but not fibrous flesh to minimize disintegration upon defrosting; (5) good yield from the trees every season; (6) flavor must be characteristic and not freeze out; and (7) should preferably be resistant to oxidative browning; (8) and the fruit should be able to withstand relatively rough handling without bruising badly. (9) Tender and smooth skin are additional desirable characteristics for apricots and nectarines which are generally frozen unpeeled.

* * *

PEACHES—During the past three fruit seasons, the varietal suitability of a number of commercial and seedling varieties of peaches grown at the University of California, Division of Pomology's experimental orchards near Winters, was compared. It was found that the best frozen sliced peaches can be prepared from J. H. Hale, Rio Oso Gem, and Elberta.

* * *

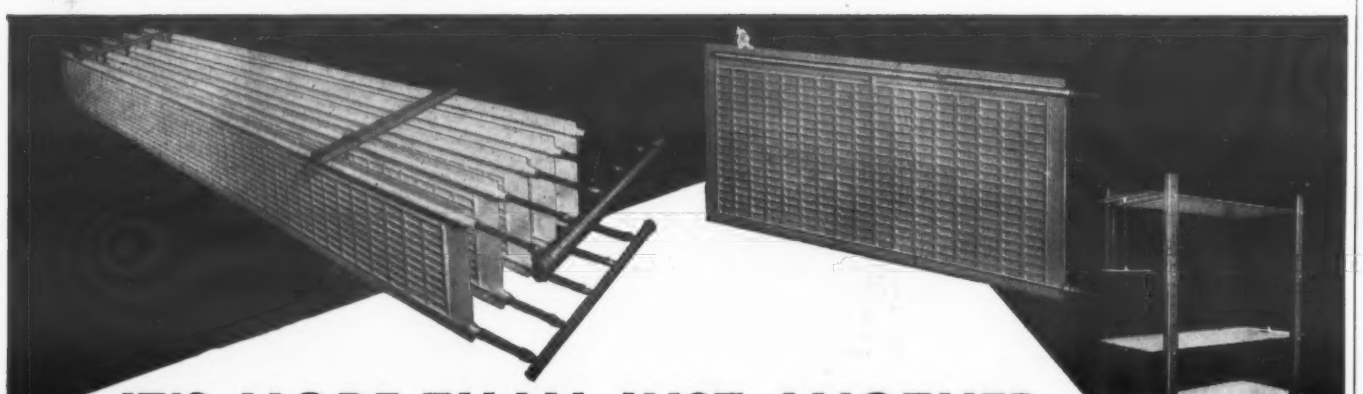
APRICOTS—Most of our experiments have indicated that Royal or Blenheim, which are two names for the same variety, are best for freezing, mainly because they ripen most uniformly and are less subject to pit rot than any of the other readily available varieties. The best frozen apricots in flavor, color, and aroma, that we have ever encountered were carefully ripened, scientifically harvested, and processed experimental samples of the Hemskirk variety packed by Joslyn in 1938.

Refrigeration, Electric Firms Share New Business Quarters

NEW WESTMINSTER, B. C.—Acme Refrigeration and R. L. Davies Electric have recently moved into their joint location at 98 Sixth St. here.

Acme Refrigeration, headed by A. A. Calder, will feature cold storage locker plant equipment along with refrigeration equipment for apartment blocks and industrial installations. He also has the Canadian General Electric franchise for commercial refrigeration, it is reported.

Davies Electric plans to feature household appliances in its new showroom, along with its electrical contracting business. Mr. Davies, head of the organization, has been in the electrical business here for 15 years.



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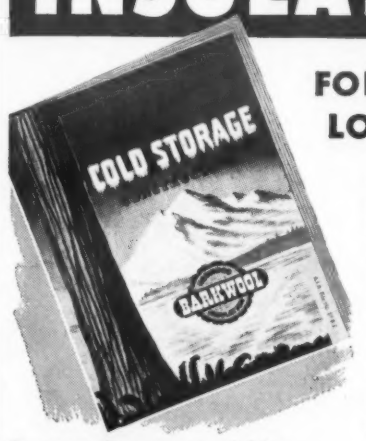

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Instalment No. 33

Safety Switches

In many installations it is necessary, and on all jobs it is advisable, to incorporate some safety means to prevent moving of the truck while the truck system is connected to the plant refrigerating system. This can be accomplished on trucks having a box cover (see Fig. 10) or door to the valve compartment by the use of a circuit-breaking switch actuated by the cover or door.

When the cover or door is open the ignition circuit of the truck engine is broken and the truck cannot be started until the doors are closed.

Instead of breaking the ignition circuit, the switch may be hooked up to a warning light which would be turned on when the flexible refrigerant lines are connected to the truck.

Where the valves are mounted in the open, a hinged paddle block is often employed. Before the valves can be connected, the paddle block must be dropped out of the way, and this would operate the warning light or circuit-breaking switch.

If no more positive safety means is employed, the ignition key of the truck may be placed on a wire ring just large enough to hang over the make-and-break valves on the truck. This ring would be placed over the valves before the truck halves and plant halves are connected. Thus, the ignition key would not be available until the valves had been separated.

Another method which is of some help but doesn't give positive safety is to place a warning cover over the steering wheel of the truck when the truck is connected to the plant refrigerating system.

Generally, where a fleet of trucks is connected to a central plant by means of make-and-break valves, it is always better to assign one responsible man to the job of connecting and disconnecting the lines rather than have the individual truck drivers make the connections.

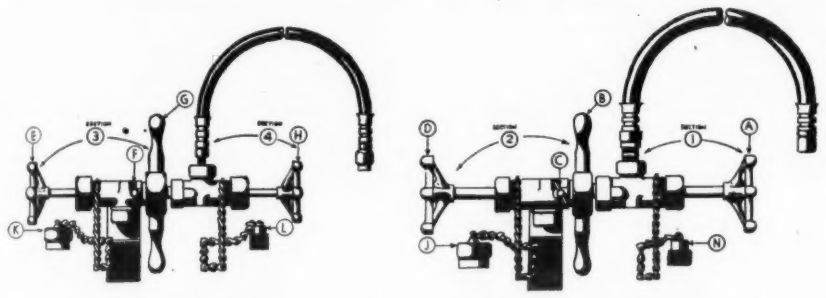

Fig. 12—A typical make-and-break liquid line valve appears at left, while on the right is the suction line valve. Sections 2 and 3 are mounted on the truck.

* * *

How to Connect Make-and-Break Valves

Steps in the connecting of plant and truck halves of the make-and-break valves are as follows (see Fig. 12):

1. Remove dust caps J and K and plugs L and N.
2. Join plant liquid valve (Section 4) to truck liquid valve (Section 3), tightening union G firmly.
3. Join plant suction valve (Section 1) to truck suction valve (Section 2), tightening union B firmly.
4. Momentarily crack the plant half liquid hand valve H, admitting a small amount of refrigerant into the space between the two joined halves of the make-and-break valve.
5. Open purge valve F for a few seconds to allow air to escape under pressure of the refrigerant.

(Make-and-break valves for ammonia systems do not have purge valves.)

6. Open fully plant half liquid hand valve H and truck half liquid hand valve E.
7. Momentarily crack the body half suction hand valve D to admit a small amount of refrigerant to the space between the two joined halves of the make-and-break valve.
8. Open purge valve C for a few seconds to allow air to escape.
9. Open fully body half suction hand valve D and plant suction hand valve A.

How to Disconnect Make-and-Break Valves

To disconnect the make-and-break valves after the truck plates have been fully charged, proceed as follows:

1. Close plant half liquid hand valve H several minutes before making the disconnection to insure pumping off any liquid refrigerant in the truck half of the system. It is not necessary to reduce refrigerant suction pressure to an extremely low point.
2. When pressure reduction indicates that only gaseous refrigerant remains in the truck plates and lines shut, hand valves E, D, and A tightly.
3. Disconnect plant half from body half by unscrewing unions B and G.
4. Replace dust caps J and K and plugs L and N.
5. Close valve compartment, compartment cover, or paddle block to release safety device.

Reasonable attention to the pressure applied when tightening the union and careful handling of the valve to prevent damage to the face of the union will greatly lengthen the life of the union gasket and prevent refrigerant losses at this point.

With ammonia type valves it is advisable to loosen the packing gland nut before the stem is turned and to retighten the nut after each opening and closing operation to insure long packing life, a leak-free valve, and unscored stems. Continual use in tight packing will score the stainless steel stems.

Fig. 13—A truck driver connects the refrigerant lines to the valves.

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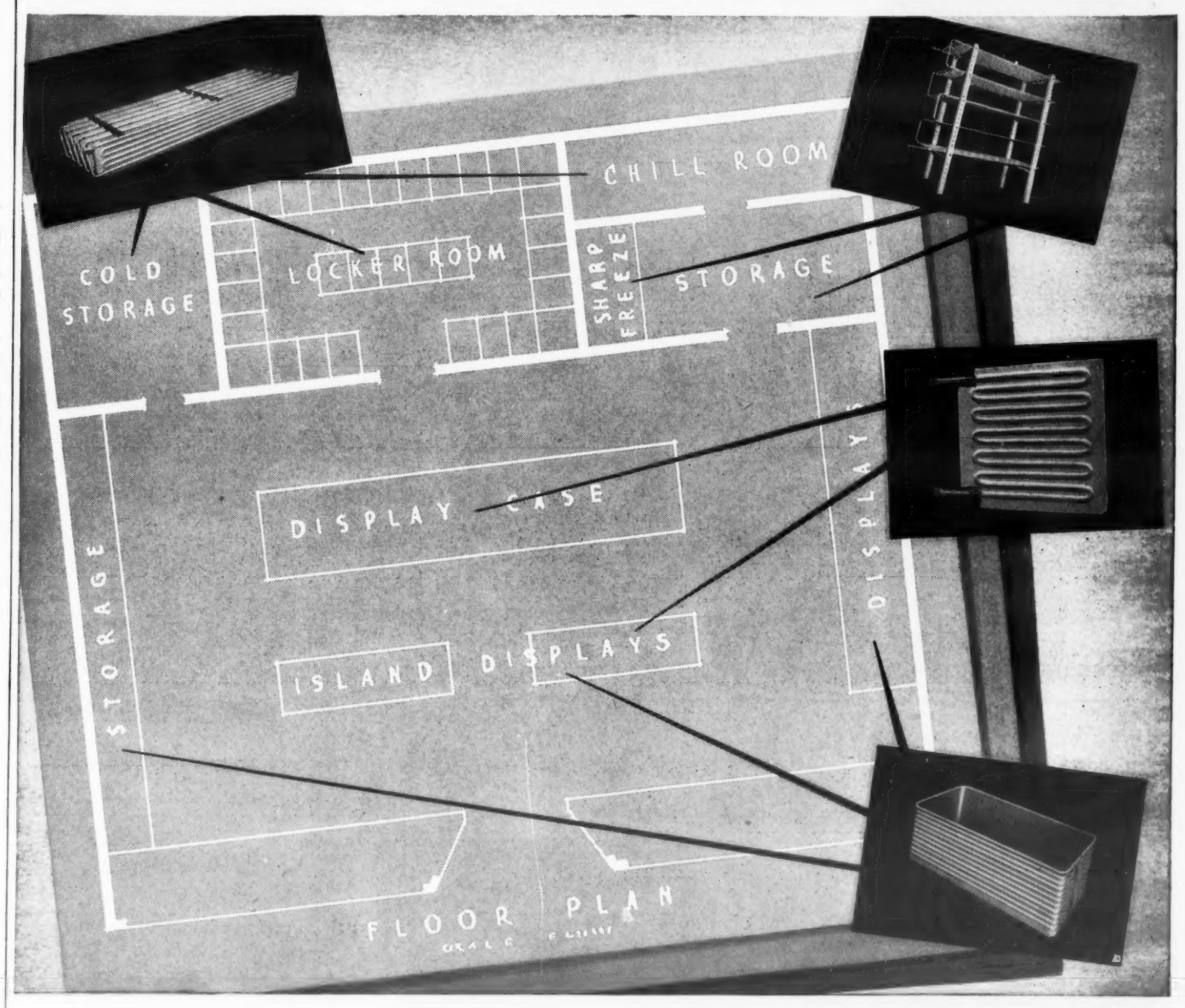

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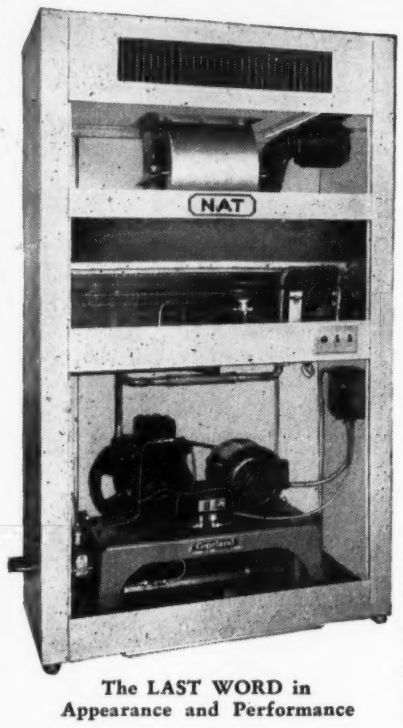

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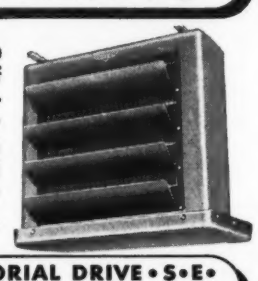

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Refrigeration Problems

And Their Solution

By P. B. Reed

For Service and Installation Engineers

Manager, Refrigeration and Air Conditioning Division, Perfex Corp.

Why the Heat Pump?

For many years, almost since the early days of Edison, men have dreamed of heating houses by electricity. Most of these early dreams visualized a number of resistant type electric heating elements around the house, directly throwing off heat from their glowing hot wires. This would be an almost ideal way of heating—it would be clean, safe, easily and accurately controlled and would require almost no attention. The fuel would be delivered to the house by wires, without even ordering it and storage bins or tanks would be unnecesary.

The main objection to this method of heating is its cost of operation. Using electricity to produce heat in this manner requires, even for a small house, a great deal of electricity compared to the amount required for the electric lights, vacuum cleaner, and other small appliances or even for the electric cooking stove.

Just how much electricity would be needed to heat a home in this manner?

ESTIMATING AMOUNT OF HEATING OR COOLING

Heating men can estimate the amount of heat necessary *to put into* a house to heat it to a comfortably warm temperature in the winter, just as refrigeration or air conditioning engineers can estimate the amount of heat necessary *to take out* of a house to cool it to a comfortably cool temperature in the summer, and they do it in much the same way.

They calculate on the basis of so much heat leakage through the walls at an established number of B.t.u. per square foot per degree temperature difference between the outside and inside temperatures, and they also take into account various miscellaneous "loads" just as we do in estimating the number of B.t.u. a refrigerating system must remove from a walk-in cooler.

Just as in refrigeration, the construction of the house has a very important bearing on the amount of heat that leaks through the walls, so insulation is as necessary to keep heat in as it is to keep heat out. A well-insulated house requires much less fuel and a lower cost of heating than if its walls are un-insulated.

HEATING A FIVE-ROOM HOUSE

It is not necessary for the purpose of this discussion to go into details, but let us take for example, a small five-room bungalow in the medium temperature zone of the United States. It is well built and the roof and walls are insulated. The outside temperature gets down to -10° F. occasionally, but not often.

We plan on keeping the house at 70° inside, so the maximum temperature difference is 80°. On this basis, the *maximum* amount of heat *per hour* that we would have to supply would be about 36,000 B.t.u. Now, how much electricity would we have to supply if we directly heated this house with electric radiant heaters?

One watt of electricity, if converted to heat, is equivalent to 3.415 B.t.u., so one kilowatt or 1,000 watts (also called a KW) is equivalent to 3,415 B.t.u. If 36,000 B.t.u. are needed, then 36,000 ÷ 3,415 or 10½ kilowatts will be required to supply that much heat *per hour*.

JANUARY ELECTRIC HEAT UP TO $75

The cost of electricity varies with the location, and like most commodities, becomes cheaper the more you use. In fairly large quantities, that is at the rate of 10½ KW per hour, most electric utilities would furnish it for one cent per KW per hour or less, so for a full day of 24 hours that the outside temperature was -10°, we would use 245 KWH at a cost of $2.45. At this rate, a month's heating would cost almost $75.

It is extremely unlikely that there would be any one month in the moderate temperature belt in which our example house is located, that the weather would be this severe. In fact, it is unlikely that there would be many days when the outside temperature would be below zero, around the clock.

The heating people have a way of estimating this average heat required. Through associations and engineering societies they have kept and have collected records for each month, for many cities in the United States and they publish these records in heating handbooks and magazines.

USING DEGREE-DAYS TO ESTIMATE LOAD

To make this information more usable they have devised what is known as a "degree-day" which is based on an average 65° temperature. If the temperature is 20°, then for that day there are 45 degree-days, that is, the difference between 20 and 65. The temperature for each day of the month is recorded and the degree-days calculated and the degree-days for the entire month added together to get the number of degree-days for the month. The degree-days for the entire year are added and form the basis for how much fuel would be required for heating purposes for the entire year.

$33 FOR AVERAGE JANUARY

Let us assume that our example house is in a city for which the degree-days for the month of January are 1,000 and for the entire year 5,000. On this basis our example house would use less than one-half of the fuel for the *average* month of January instead of a month in which the temperature was down to -10° every day.

So instead of using $75 worth of electricity per cold month (the month of January, let us say) we would use about $33 worth, or $165 for the winter. That is still more than most people can afford.

All of this has been on the direct use of electricity for heating by means of radiant heaters. But electricity can be used in another manner for heating—not a direct method but an indirect method, in which the electricity can be used as the agent or means of *carrying heat from one place and putting it somewhere else.*

'FREE' HEAT IN NATURE

There is a very great deal of "free heat" in the world. The trouble is that it takes work and thus costs money to bring it from where it is to where we want to use it. This is just the reverse of refrigeration.

In refrigeration we have heat

(Continued on next page)

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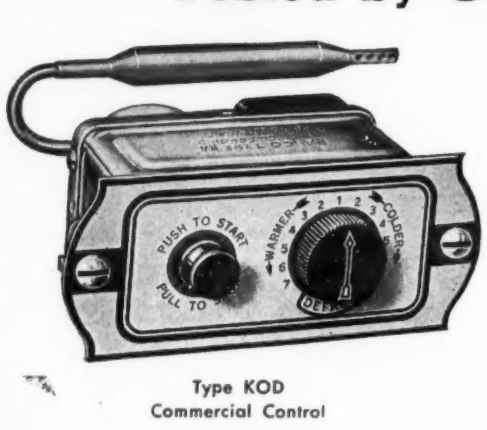

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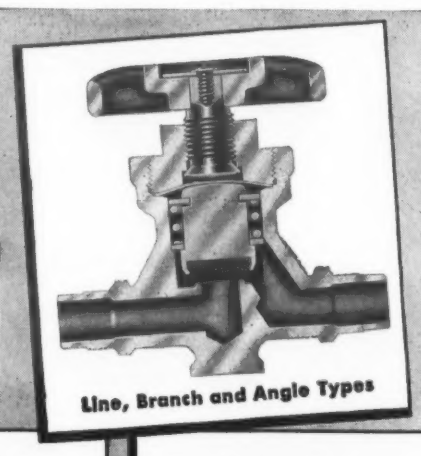
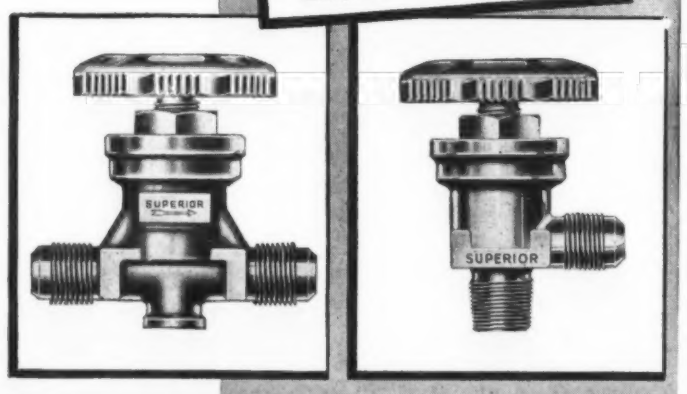


Line, Branch and Angle Types



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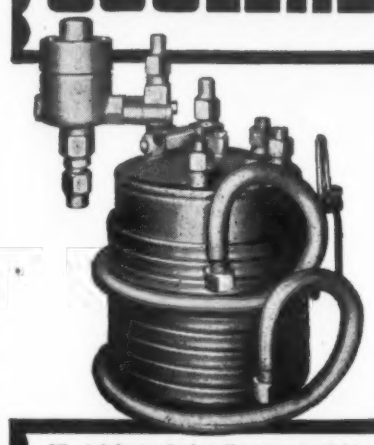

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Heat Pump--

(Continued from preceding page)

where we do not want it and we wish to get rid of it. So we transfer it out of the refrigerator, walk-in cooler or other "refrigerated" space, to the outside and there we throw it away into the air or into water which we throw away into the sewer.

Even in the wintertime there is a great deal of heat in the outside air; otherwise the temperature would be down near absolute zero—several hundred degrees below our zero F. There is lots of heat in the ground and in sub-soil water in the ground.

There is a great deal of heat in the water in rivers, ponds and lakes. To heat our homes, offices, stores, and factories, all we need to do is to gather that heat in some way and move it into the rooms where we want to use it to keep ourselves warm.

HEAT AT 0° FOR HEATING

The fact that the heat exists in the outside air, well water, etc., at lower intensities or temperatures does not matter too much. We can concentrate it and raise its intensity or temperature from 0° or 40° to 80° or more so that we can use it for heating purposes.

The main thing is to be able to *gather* the heat *and transfer* it in quantity at a cost that compares with the various methods of producing heat directly from coal, oil, gas, or other "fuels."

The equipment used to collect and transfer this free heat to places where it is used for useful heating, is sometimes known as a "heat pump" for it is considered as pumping heat from one place to another. This name is not very descriptive nor has it much "glamor" or sales appeal to the public. Some better name needs to be coined.

HEATING BY REFRIGERATION

But we can use refrigeration equipment to heat houses and it appears probable that in moderate climates at least, it can be done at a cost that may compete with other forms of heating. There are several factors that favor the use of refrigerating equipment for heating, but these two are perhaps most significant.

(1) About four times as much heat can be moved from outside to inside by electrically driven refrigerating equipment, than if that same amount of electricity were used directly in the house for heating.

(2) The same refrigerating equipment that is used in the winter for moving heat into and thus heating the house, can in the summer be used to move heat out of and thus cool the house.

COEFFICIENT OF PERFORMANCE

In enlarging on the No. 1 factor, we must go back to the simple refrigerating system, and we must remember that a refrigerating machine or system does not manufacture "cold," but that cooling is done by taking heat away, and the refrigerating system is the carrier that takes the heat away. We must also remember that the power in a refrigerating system is used mainly in doing the work of running the compressor and compressing the vapor.

In the perfect "Carnot cycle" the amount of heat moved from the evaporator to the condenser and dissipated about 5¾ times the work done on the gas in compressing it. This ratio, called the "coefficient of performance," is unattainable in practice, and moreover varies slightly with the different refrigerants.

With a good deal of care in designing the equipment and in guarding against losses by the use of heat-exchangers and similar heat-saving devices, it is quite feasible to get coefficient of performance of between 3½ and 4. That is, it is practical to move 3½ to 4 B.t.u. for every B.t.u. of work.

Thus, if we drive a refrigerating machine with a 1-hp. motor that uses 1,000 watts per hour (1 KWH), we can move heat amounting to 3,500 to 4,000 B.t.u. per hour or about 11,950 to 13,660 B.t.u. (by multiplying 3,500 and 4,000 respectively by 3.415, since one watt is equivalent to 3.415 B.t.u.).

MIGHT COST AS LITTLE AS $10 FOR JANUARY

A 3-hp. unit that would use about 3 KWH (3,000 watts per hour) could therefore supply about 36,000 to 40,000 B.t.u. of heating to a house and would be about the right size for our example house which we estimated needed a maximum of 36,000 B.t.u. of heat per hour under rather severe conditions of -10° outside temperature.

So instead of using 10½ KWH as was the case for direct electric heating we would use only 3 KWH. For the month of January we would then use only about $10 worth of electricity and only about $50 per heating season, based on 1,000 degree-days for January and 5,000 for the year.

It must be noted at this point that the conditions for this example are favorable; it is a mild climate, the house is small and it is well built and well-insulated. Also a coefficient of performance of 3½ to 4 is rather good.

For the average uninsulated or lightly insulated house in a cold climate, and with less efficient equipment, the cost of operation could easily run double the above figures. It must also be noted that the cost of operation of a circulating fan or pump is not included in these costs.

By using refrigerating equipment as a "heat pump" to move "free" heat from air or water into the house to be heated we can heat the house at a cost that is reasonably comparable to the more common direct methods of heating.

FIRST COST

There are many people and types of businesses who would greatly benefit from the use of this method of heating and the electric utility companies are of course quite interested in seeing this method of heating come into more widespread use, for it would add a very substantial and desirable type of load to their lines. At present the original cost of the equipment is generally greater than that of an ordinary coal, oil, or gas fired furnace; consequently the interest on the investment represents a quite considerable item that must be added to the cost of electricity, in order to arrive at a total cost of operation.

COMBINED HEATING AND COOLING EQUIPMENT

The second factor, the ability to use the heating equipment as cooling equipment is a very impelling reason to cause many people to pay higher operation costs for heating and to make the rather large original investment necessary to purchase the equipment.

Many influential and able people in the industry are very actively engaged in solving the engineering and economic problems of the reverse cycle" system, so named because the direction of heat flow is reversed from winter to summer.

Some of the methods by which the reversed cycle system is accomplished will be covered in a later article.

Service Parts Co. Has a Celebration

When Service Parts Co. held a grand opening of its remodeled quarters in Melrose Park, Ill., these officials of the company were greeting guests from behind "the world's longest refrigeration supply counter." Left to right are Ed Jaske, Pat Ravanessi, and Al Gatz.

(Photograph by Austin Jones, Kerotest Mfg. Co.)

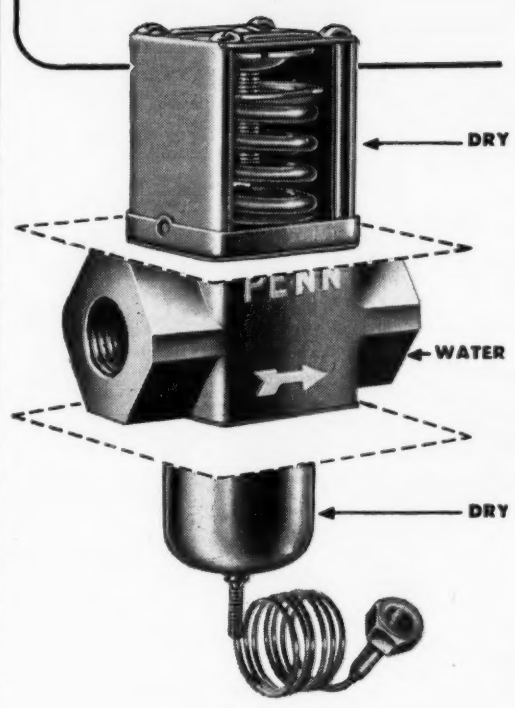
James Harter To Direct Hayer Co. Promotion

MINNEAPOLIS—The F. C. Hayer Co., upper midwest distributor of Gibson refrigerators and other home appliances, has named James V. C. Harter as advertising and sales promotion manager.

Mr. Harter was formerly a division advertising manager with Butler Brothers in Chicago, and with the mail order division of Montgomery Ward. For the past year he has been associated with the Jensen Printing Co. in Minneapolis.

HEAT TRANSFER EQUIPMENT
MARLO COIL COMPANY
SAINT LOUIS, MISSOURI

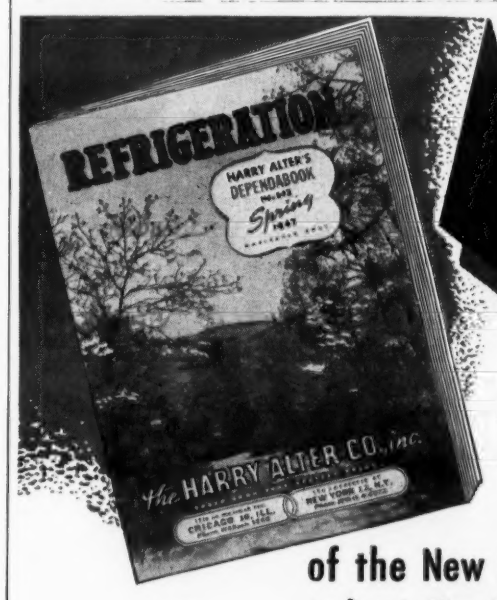
Why PENN VALVES Last Longer



● PENN Water Valves are "zoned" to protect sliding parts from the destructive effects of sedimentation, corrosion and rust. Study the illustration. Water flows through the *central zone only.* No contact is made with the range spring and sliding parts. They remain dry and free from the abrasive deposits which cause other water valves to wear prematurely.

Then, too, in PENN Water Valves sticking seats and water hammer are eliminated . . . yet they are very sensitive to changes in refrigerant head pressure. Built in threaded and flanged styles . . . in sizes to meet every refrigeration need. Write *Penn Electric Switch Co., Goshen, Ind.* Export Division: 13 E. 40th St., New York 16, U. S. A. In Canada: Penn Controls, Ltd., Toronto, Ont.

PENN AUTOMATIC CONTROLS
FOR HEATING, REFRIGERATION, AIR CONDITIONING, ENGINES, PUMPS AND AIR COMPRESSORS



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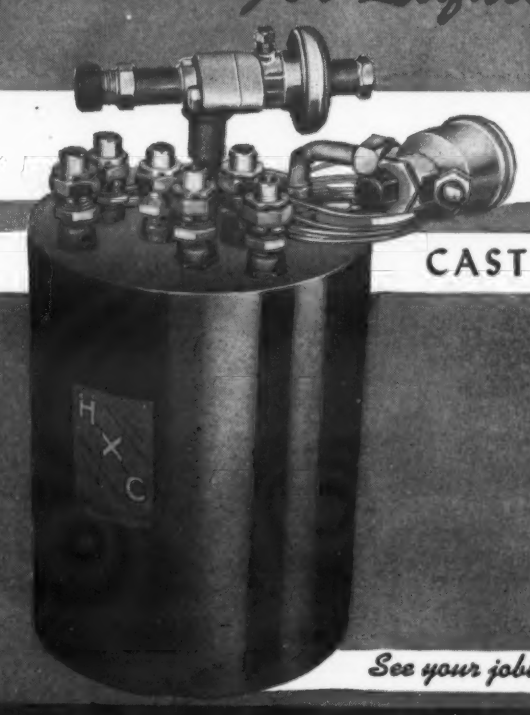

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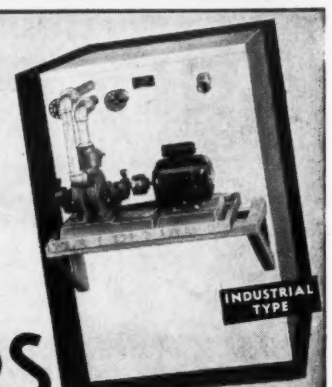
WATER COOLERS



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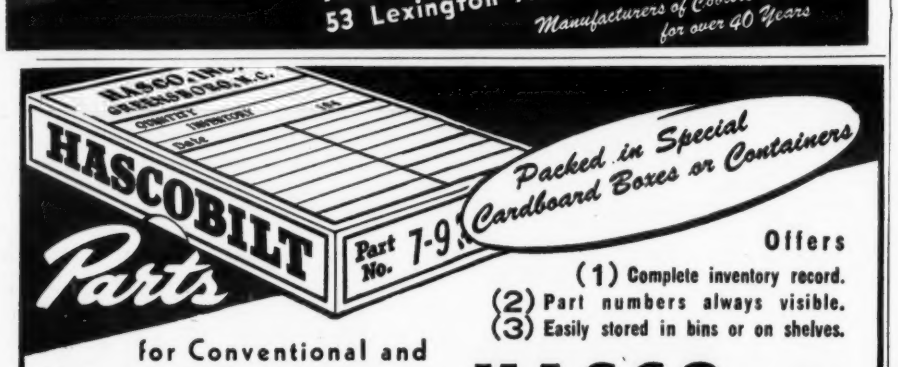

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SAVE THAT DOOR! Use THORS to help prevent sticking doors. An average freezer door's treatment with THORS costs about four dollars a year. That's mighty cheap, especially when you know how THORS helps save your doors, cuts down time loss and repairs.

THORS is a clean, odorless, semi-solid product and will not affect most gasket materials. The first application of THORS should cover jamb and gasket thoroughly. One application lasts for weeks — all you have to do is brush off the light snow that forms around gasket leaks. You do not apply THORS again until after 5 or 6 brushings.

THORS is also recommended for the doors on refrigerator trucks.

Save money—cut down defrosting time by about two-thirds. Reduce labor costs by applying THORS on your refrigeration coils and plates. One application lasts for several defrostings.

THORS will not corrode black iron, alloy, steel and galvanized metal surfaces.

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Engineer Urges Simple Test Be Developed To Find Coefficients of Moist Insulation

DETROIT—Cooperation of refrigerating engineers in encouraging the development and prompt adoption of a simple standard test for determining the insulating value of moist samples of insulating materials was urged by Cecil Jefferson, engineer at the Vermiculite Research Institute of Evanston, Ill., in a talk before the Detroit section of the American Society of Refrigerating Engineers recently.

"Only in this way," he declared, "will it be possible to specify proper insulation and design structures based upon actual service conditions.

"One test method has been developed," he said, "but it is complicated and requires rather elaborate equipment."

Mr. Jefferson pointed out that the only standard test for insulating coefficients at present is the hot plate method in which only oven-dry samples are used.

"It is impracticable to use moist samples with this type of equipment," he explained, "owing to the fact that the heat input cannot be stabilized as long as the moisture is being vaporized in the sample and condensed on the cold plates.

EVEN BEST NOT PERFECT

"Before any accurate readings can be made, the heat input must equal the heat lost and, as long as there is any moisture in a test sample, this equilibrium of heat flow cannot be established."

In discussing the effects of moisture on insulating materials, Mr. Jefferson pointed out that even the best known vapor barriers cannot totally prevent moisture from getting into the insulation.

"It is true," he said, "that the amount of moisture which may accumulate within the insulation can be partially controlled with vapor barriers on the warm side of the insulating wall, and without an effective barrier no insulation would be satisfactory."

But, he pointed out, these barriers are often vulnerable at the seams and at various wall openings to the penetration of moisture.

Insulating materials, he said, may be roughly divided into two groups, the hygroscopic and those which are practically non-hygroscopic.

"The hygroscopic materials are those which, because of their chemical and physical structure, are highly receptive to water vapor," he explained.

"In fact, their affinity for water vapor exceeds the pressure tending to force the vapor through the insulation in the direction of the cold surface.

"Most of these materials are composed of loose fibers or granules of a substance which is itself porous in texture, whose function in the raw or natural state was to absorb and hold or transport large quantities of liquid.

"When these materials become filled with moisture, their insulating value is materially reduced, owning to the more or less continuous water phase throughout the mass of material.

"Not only is the insulating value reduced, but the insulating material starts to mold, or disintegrate, often with disagreeable odors.

"In contrast to these hygroscopic materials are those which, because of their chemical and physical nature, are highly resistant to water vapor. Vermiculite is such a material."

Vermiculite is a material derived from mica which has approximately 1,000,000 laminations per inch, he indicated. Each of these laminations is separated by a molecular quantity of water, he added.

"Upon heating to approximately 1,800° F., the water's being rapidly turned to steam expands the laminations to form granules of mica containing innumerable tiny air pockets," he explained.

"These tiny separate air cells, combined with the reflecting mirror-like surface of the intervening layers of mica, give Vermiculite its insulating value.

"Its affinity for water vapor is less than the vapor pressures found in normal cold storage construction, and the vapor passes through Vermiculite to condense upon the coils where it can do no damage.

STARTLING DIFFERENCES

"To determine the reaction of various insulating materials in the presence of water vapor, some preliminary tests were made in our own laboratory.

"A sample of each material to be tested was exposed to humid air maintained at a reasonably constant room temperature of 75 to 85° F. and from 90 to 100% humidity.

In a rather short time, some startling differences in resistance to moisture became apparent. Some of the hygroscopic materials, or those that readily take moisture into their structure when exposed to water vapor, took up as high as 120% of moisture by weight, Mr. Jefferson told the engineers.

"Vermiculite reacted very favorably by taking up only 6% moisture by weight.

"The presence of a waterproofing treatment on the surface of some of the more seriously affected materials seemed to be of no value against their natural affinity for water vapor.

"The waterproofing films were apparently not vapor barriers, and allowed free passage of water in the gaseous form.

"Although these tests were made at room temperature, and are not conclusive, it is logical to assume that they indicate a moisture relationship which might be expected in refrigerated construction."

Joins Universal Cooler

DAN MANDERY

* * *

MARION, Ohio—Dan Mandery has been appointed service manager of Universal Cooler Division, International Detrola Corp.

Mr. Mandery has been associated with the Hussmann-Ligonier Co. for the past 10 years, and before that was a sales manager in the Omaha area for Frigidaire Division.

3 Added to Seattle Staff Of Minneapolis-Honeywell

SEATTLE, Wash.—Industrial expansion in Seattle and an increasing demand for automatic controls of all types has made necessary a further expansion of company activity in this area, W. G. Warrington, Seattle branch manager for the Minneapolis-Honeywell Regulator Co. has announced.

Three new men have been added to the Seattle staff. Frederick N. Fitting has been added to the staff as instrumentation engineer and will handle sales, engineering, and installation of industrial instruments for the company's Brown Instrument division. Preston B. Tack has been added to work on specialty applications of control instruments and also to work in the air conditioning division. Franklin L. Flower will supervise sales and installation of Moduflow.

Westinghouse Motor Booklet Out

PITTSBURGH — Westinghouse Electric Corp. here has recently published the "Motor and Motor Control Selection Guide," which is an eight-page booklet designed to aid its readers in choosing the right motor and control for a particular application.

The four inside pages of the book open up, providing a spread on which is printed the entire motor and control selector table. On the other four pages are charts, graphs, and descriptive material.

A-B
BULLETIN 700
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OVER 300 TYPES
Bulletin 700 solenoid relays are available with from 1 to 12 poles, with normally open or normally closed contacts. Furnished open or with enclosing cabinet.

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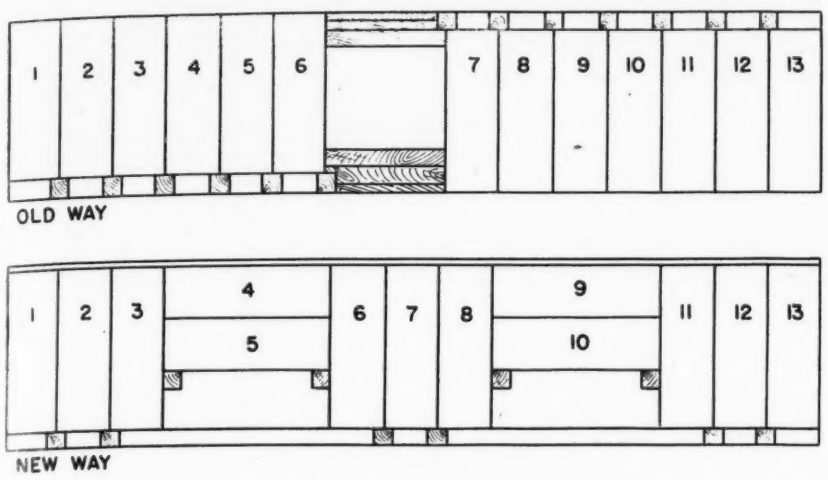


Diagram (top) shows the method formerly used by Carrier to load its freezers into freight cars. The other drawing outlines a new way suggested by a Carrier employe. This suggestion won him $2,500.

* * *

Carrier Employe Wins $2,500 by Devising New Way To Pack Freezers In Freight Car

SYRACUSE, N. Y.—For devising a new method of loading 30-cu. ft. home freezers in freight cars, eliminating damage in shipment, Virginio Libera, an employe of Carrier Corp., has been awarded $2,500 by the company's Suggestion Department.

Mr. Libera evolved a new plan for packing the big freezers in cars which not only saves two man-hours of labor per car, large quantities of lumber for shoring, and eliminates damage in shipment, but permits the same number of freezers—13—to be carried in each car. The award was made after 42 carloads, comprising 546 units had been delivered to destination without damage. Many of these cars went to the Pacific Coast, others to Texas, and other distant points, it was reported by the company.

The lumber saving per car includes 9 lengths of 2 by 4's and 4 by 4's, ranging from 20 in. long up to 9 ft. 2 in., also 17 wooden cleats 2 by 4 and 2 by 6 in. in size, and 18 in. long.

Mfrs. Durable Inventories, Daily Average Shipments Increase During March

WASHINGTON, D. C.—Reports to the Department of Commerce by manufacturers of durable goods showed increased value of both inventories and daily average shipments for March as compared with February.

The Commerce Department said nearly all durable goods industries enjoyed improved sales positions. Major inventory increases were reported to be concentrated in heavy goods industries.

Value of stocks at the end of March totaled $21.5 billion, $300 million above the February figure, according to the Department.

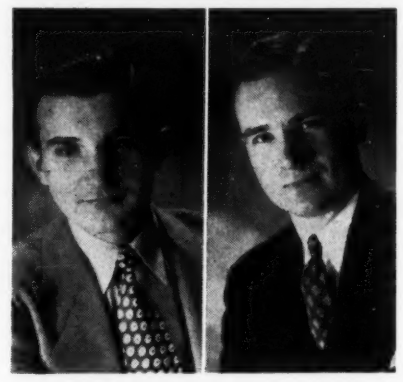
The machinery, transportation equipment and building materials industries reported rises of about 2%, the Department reported.

Lundy Opens Appliance Store In Wilkes-Barre, Pa.

WILKES-BARRE, Pa. — Lundy Electric Co. has opened a new electrical appliance store at 11 East Market St. under the management of James W. Lundy.

The store will retail six nationally-known brands of washers, five brands of radios, three of electric refrigerators, four of vacuum cleaners, five of electric ranges and three of electric ironers. A complete repair department will be maintained for all types of appliances.

Sales Executives



E. A. Fairlamb A. K. Fribance

* * *

National Gypsum Names 2 to New Sales Positions

NEW YORK CITY — A. Kenneth Fribance has been appointed manager of industrial insulation sales for National Gypsum Co., and Everett A. Fairlamb has been named industrial sales engineer, in charge of the development of new products and new sales outlets.

Mr. Fribance has been with the Arrow Hart and Hegeman Electric Co., working in the last three years as sales representative in the western New York territory, specializing on heating and ventilating problems. He graduated from Rochester Institute of Technology, majoring in distribution.

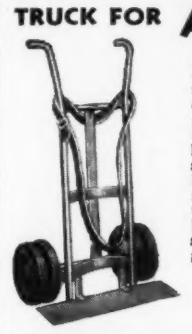
Mr. Fairlamb, a graduate of Virginia Polytechnic Institute in business administration, was a first lieutenant with the 8th Air Force during the war.

Regional Sales Manager

Large National Manufacturer has key position opening for Regional Sales Manager to assume responsibility for sales in East, Headquarters New York City. Successful applicant must have good performance record in major electric appliances, be familiar with Eastern market, be capable of supervising personnel and securing distributor efficient cooperation. Preferable age between 35 and 45. Substantial salary and bonus compensation. Reply in confidence.

Box 2357, Air Conditioning & Refrigeration News

NEW DUAL WHEEL TRUCK FOR APPLIANCES



Rolls like baby buggy on 4 big (Dual) 8 x 2 rubber tires. Unusually resilient, quiet. Easily handles refrigerators, and all appliances up to 1000 lbs., 54" ht.; 24¾ nose; 13' web strap. Also handles crates, boxes, bags, etc. $31.95 f.o.b. Over 15,000 Handees trucks sold by mail. Send back express collect if not satisfied. Order Monday—get Friday, from

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Refrigerator Manufacturers Expand Uses For Tougher, War-Developed Plastics

CHICAGO — In addition to increased capacities, quieter operation, better insulation and other improvements, a notable feature of 1947 home refrigerators, freezers and air conditioners is the substantial increase in the use of plastics, it is reported by the Refrigeration Equipment Manufacturers Association.

Widespread new plastic applications in the industry are the result of the development of new materials that are tougher and more resistant to cold, moisture, and food acids, according to the manufacturers. Experiments are proceeding in the direction of still further adaptions.

Before the war, few plastics were used in refrigeration equipment. Before the adoption of new materials, refrigeration producers subjected plastic materials believed suitable to strenuous and prolonged tests which extended, in one case, to slamming the plastic doors on a freezer locker 135,000 times at 15 degrees below zero to test the durability of the material.

3 TO 12 PARTS PER UNIT

In another instance, a manufacturer made 1,000-hour moisture resistance tests of a plastic coating for refrigerator shelves under conditions of 100 per cent humidity at 115 degrees of heat.

In a recent survey of new home refrigerators of seven leading manufacturers, it was found that from three to twelve parts now are made of plastic. One company, which used no plastics before the war, plans to use nearly half a million pounds of an improved molding compound polystyrene for twelve parts per refrigerator in its current year's production.

Another producer has more than doubled the amount of plastics used to nearly 2,000,000 pounds annually. In a third case, the manufacturer has extended the use of plastics to include frozen food cabinets and air conditioners as well as refrigerators.

New plastics have been adopted by the refrigeration industry for reasons of both appearance and utility, the REMA report discloses. For door handles, doors, clock faces and other embellishments, plastics offer a versatility of color, shape and finish that has aided in making postwar refrigerators more attractive. Transparency of plastics in food compartment doors is a utility feature, while at least one large frozen food cabinet manufacturer found that the use of a one-piece lid liner, 4½ inches deep, of laminated phenolic not only added to appearance but saved weight and gave excellent insulation. Another company said that plastics were tasteless, non-staining, grease-proof and had good color stability.

TYPES OF PLASTICS

Prominent among the plastic materials now used in refrigeration products, according to manufacturers, are the molded and laminated phenolics, molded cellulose acetate, molded and extruded cellulose acetate butyrate, and acrylic sheets. The use of polystyrene, a comparatively new, war-perfected thermoplastic, has increased rapidly in refrigeration products because of the material's qualities of becoming stronger and tougher as the temperature drops.

A derivative of petroleum and coal polystyrene is particularly useful in electrical applications and plastic producers report that it does not warp, discolor, or deteriorate under contact with acids or foods or cleaning agents or with varying humidity and low temperatures. The producer who coats refrigerator shelves with plastic employs a synthetic resin which is said to give better appearance, durability, and flexibility than tin coating.

Included in plastic applications in new home refrigerators, frozen food units, and air conditioners are evaporator, fruit, and vegetable compartment doors; frozen storage seals; shelves, shelf supports, and shelf coating; drip trays; controls and knobs; handles; lamp shields; clock faces; name plates and decorative panels; glass door hinges; freezer lids; door liners and, in the case of air conditioners, grilles, dials, and controls.

International Detrola 5-Month Sales Net $1,204,324 Profit

DETROIT—Consolidated net sales of International Detrola Corp. for the five months ended March 31 were $30,050,108.53 and net profit after tax provision was $1,204,324.70, equal to 99 cents per share, President C. Russell Feldmann has announced.

The company, which has manufacturing divisions in the refrigeration, steel, radio, aircraft, and machinery fields, in its entire fiscal year of 1946 had total sales of $40,810,028.22 and a net of $1,012,123.92, or 84 cents per share.

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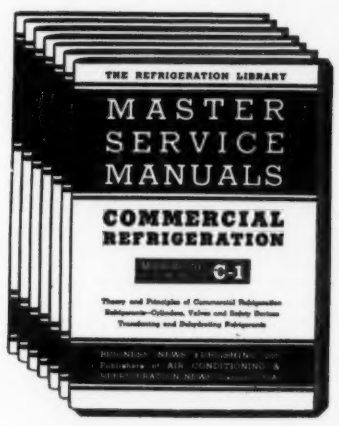

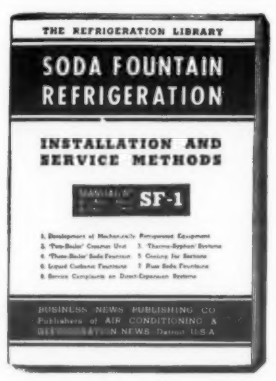

Soda Fountain Refrigeration

by Arch Black and Dean C. Seitz

MANUAL NO. SF-1—Development of mechanical refrigeration applications for ice cream cabinets, soda fountains, creamer units. Two-boiler creamer units—construction, installation, service. Thermo-syphon systems for one and two-boiler units. Service. Three-boiler soda fountains. Pressure and temperature valves. Refrigeration of jar enclosures. Methods. Service valves and controls. Liquid Carbonic fountains—installation, operation, service. Direct expansion Russ fountains. Service complaints, remedies. 104 pages. Price $1.00.

MANUAL NO. SF-2—Bastian-Blessing 1936 and 1937-38 hookups, using Frigidaire water coolers, complaints and remedies. Brunswick-Balke-Collender 1936-37 and 1938-39 hookups, using Temprite flooded-type coolers. Pressure and expansion valves. Accessory fixtures multiplexed to fountains—sandwich tables, back bar base. Fountainettes. Bob-tail units. Calculations and tables for determining load requirements, condensing unit sizes. Carbonator construction and service. 96 pages. $1.00.

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by K. M. Newcum

MANUAL NO. C-1—The theory and principles of refrigeration presented in a more complete manner than in household manuals. Properties of refrigerants, including effect on lubricating oils. Types of refrigerant cylinders, valves, and safety devices. Methods of drying and transferring refrigerants. 96 pages. 59 illustrations. 10 tables. Price $1.00.

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MANUAL NO. C-3—Installation and service methods continued. Chapters on expansion evaporators, including blower units and all modern types. Thermostatic and temperature controls. Refrigerant control valves. Electric motors, starters, overload relays. 144 pages 116 illustrations. 7 tables. Price $1.00.

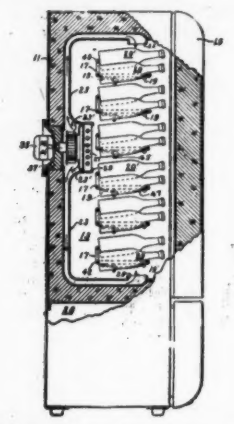
GUARANTEE—All Refrigeration Library manuals are sold on a money-back guarantee. If you are not satisfied, return the books within 10 days and your money will be refunded.

BUSINESS NEWS PUBLISHING CO., DETROIT, MICH.

PATENTS

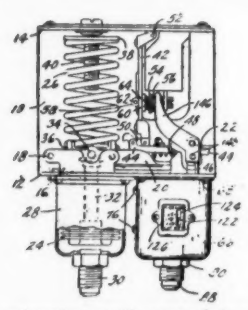
Weeks of March 11 & 18

2,417,123. FORCED AIR BOTTLE COOLER. Lawrence A. Philipp, Detroit, Mich., assignor to Nash-Kelvinator Corp., Detroit, Mich., a corporation of Maryland. Application May 31, 1944, Serial No. 538,-161. 3 Claims. (Cl. 62—102.)



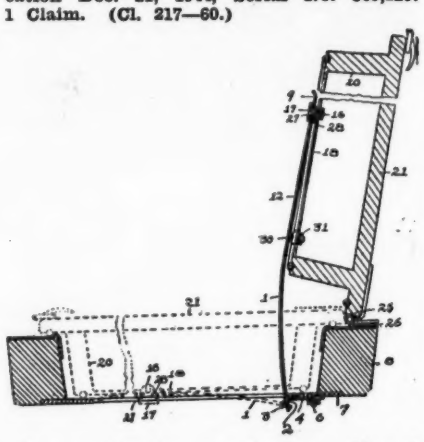
1. Refrigerating apparatus comprising a cabinet having insulated walls enclosing a storage compartment, article supporting means mounted in said compartment in vertically spaced apart relation, duct means extending across the rear wall, top wall, and bottom wall of said compartment and having its inlet end substantially midway between the top and bottom walls with an outlet at the top wall and another outlet at the bottom wall, a refrigerant evaporating element extending across said inlet end, air impelling means positioned immediately at the rear of said element and being arranged to cause air to move simultaneously toward said top and bottom walls through said duct means and out said outlets, and a motor positioned outside of said cabinet and being operatively connected with said air impelling means.

2,417,219. HIGH SIDE CUTOUT UNIT FOR SWITCHES. Burton E. Shaw, Bristol, Ind., assignor to Penn Electric Switch Co., Goshen, Ind., a corporation of Iowa. Application June 29, 1943, Serial No. 492,679. 5 Claims. (Cl. 200—83.)



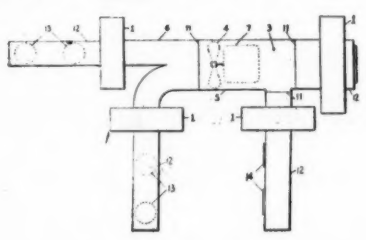
1. An actuating unit comprising a casing for attachment to a control housing, a frame in said casing, pressure responsive means within said casing and having a threaded fitting projecting through said frame and from said casing to the exterior thereof for attachment to a pressure line, a lock nut on said fitting for mounting said pressure responsive means relative to said frame, an actuating lever pivoted to said frame, a range spring connected to said actuating lever and having an adjusting screw carried by said frame and projecting through said casing for operation from the exterior thereof, said range spring normally effecting engagement of said actuating lever with said pressure responsive means, and a toggle spring interposed between said actuating lever and said frame to effect snap action of said actuating lever, said actuating lever, said range spring, said adjusting screw and said toggle spring being all mounted within said casing.

2,417,401. CONTAINER DOOR STOPPING AND SUPPORTING DEVICE. Henry Steinhorst, Utica, N. Y., assignor to Emil Steinhorst & Sons, Inc., Utica, N. Y., a corporation of New York. Application Dec. 21, 1944, Serial No. 569,229. 1 Claim. (Cl. 217—60.)



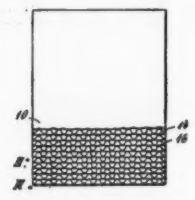
The combination of a freezer, a hinged door therefor and a door stopping and supporting device in open position comprising a hinge member on said freezer, a flat strap-like spring member having an aperture in one end thereof for the projection therethrough of said hinge member, said spring member having formed therein a long narrow slot terminating in an annular aperture, a bolt having shoulder rings of different diameter formed thereon mounted on said door, one of said shoulders adapted to slide in said long narrow slot in said spring, when said door is moved from closed position to open position the other shoulder ring adapted to engage said spring at said annular aperture, and a bolt mounted on said door, and the head of said last named bolt lying between said door and said spring, engaging said spring, whereby to force said spring outwardly to lock said other shoulder ring in said annular aperture and to allow the spring to hold the door in open position.

2,417,408. FLAMEPROOF SCREEN FOR USE IN AIR CONDITIONING CONDUITS. John W. Ford, Silver Spring, Md. Application Nov. 26, 1942, Serial No. 467,067. 4 Claims. (Cl. 98—33.) (Granted under the act of March 3, 1883, as amended April 30, 1928; 370 O. G. 757.)



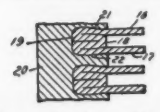
1. Means for preventing fire in a gas duct having a section with potentially spark producing apparatus therein and potentially combustible gases flowing therethrough, comprising means for defining said section, including cooling coils at both ends thereof having a cooling medium commonly fed thereto and commonly controlled from a single stage compressor means, and means for reducing the temperature of said cooling medium sufficiently to condense any combustible vapors in said gases whereby to render said gases non-flammable by accidental sparks.

2,417,435. HEAT INSULATION. Carl Georg Munters, Stocksund, Sweden. Application Jan. 6, 1944, Serial No. 517,251. In Sweden Dec. 20, 1943. 4 Claims. (Cl. 154—45.)



1. Heat insulating material comprising spaced substantially parallel plate members, structure disposed between said plate members and secured thereto, said structure comprising a plurality of sheets extending between said plate members transversely thereof and spacing means disposed between said sheets, said spacing means being constructed and arranged to form elongated air chambers between and substantially parallel to said sheets and transversely of said plates, heat transfer being in a path transversely of said plates and parallel to said sheets, the mass of said sheets and said spacing means being less than 60 kilograms per cubic meter and greater than 10 kilograms per cubic meter whereby heat transfer by conduction is held to a minimum, the average spacing between said sheets being maintained within the limits of .5 to 3 millimeters thus fixing the cross-sectional dimension of the said chambers transversely of said sheets at a value determined to be optimum for holding the transfer of heat due to radiation to a minimum.

2,417,629. COOLING FIN STRUCTURE. Wilhelm B. Bronander, Montclair, N. J.



1. A double walled cooling fin adapted to be secured in a groove and having two substantially parallel, spaced walls connected along one edge by compressible material integral with the walls and folded to form layers substantially parallel to the fin walls and substantially filling the space between the portions of said walls to be positioned in the groove whereby inward pressure directed against said material will force the walls into gripping engagement with the walls of the groove.

(To Be Continued)

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POSITIONS WANTED

KANSAS STATE college student (married) will finish course in servicing and installation of air conditioning and refrigeration in June. Wants permanent employment in Midwest region. Eligible for On-The-Job training. VIRGIL ADAMS, 1116 Bluemont, Manhattan, Kansas.

REFRIGERATION SERVICE trainees: graduates of intensive 8 month course on commercial and domestic refrigeration servicing desire on-the-job training; willing to go anywhere in the United States. For further information write William B. Arpe, Placement Manager, MASSACHUSETTS TRADES SHOPS SCHOOL, 271 Huntington Ave., Boston 15, Mass.

REFRIGERATION, AIR-CONDITIONING, heating technician, resident of Glendale, 27, married, finishing 15 months schooling at the Milwaukee School of Engineering. Prefer position with training leading to application sales engineer. Los Angeles area. Address replies to Mr. C. W. Tuell, 1020 North Broadway, Milwaukee, Wisconsin.

MAN WITH training and experience desires change from present location. Thoroughly familiar with commercial and household refrigeration. Can do service or manage service department. Successful record for training men. Outstanding ability for locating trouble. Sober, married, excellent references. Could qualify for factory representative. BOX 2344, Air Conditioning & Refrigeration News.

SOUTHERN ESTABLISHED refrigeration company handling air-conditioning commercial and locker plant installations desires services of energetic men to expand operation. Three salesmen, one engineer, service manager, three servicemen required. Attractive monthly salary guaranteed with incentive bonus plan. For confidential attention address application to BOX 2347, Air Conditioning & Refrigeration News.

POSITIONS AVAILABLE

EXPERIENCED COMBINATION commercial, refrigeration, application engineer and service manager wanted, for Frigidaire dealer. On annual salary basis. MILLER ENGINEERING CO., 118 N. Winnebago St., Rockford, Ill.

WANTED: EXPERIENCED commercial and domestic serviceman. Modern shop now employing 4 men. Increased volume creates opening for right man. Truck furnished. Salary right. Steady work, no lay-offs. Excellent town and climate. One of the best trout fishing and hunting areas in the United States. DETWEILER BROS., INC., Twin Falls, Idaho.

SALESMEN WANTED to sell nationally advertised line of Florist refrigerators and store equipment throughout East, Southeast, and Rocky Mountain territories. Refrigeration service men preferred—commission basis only. No inventory required on your part, shipments can go forward within 30 days after receipt of order. BOX 2339, Air Conditioning & Refrigeration News.

EQUIPMENT WANTED

HIGHEST PRICES paid for Grunow units and compressors in any condition. BOX 2350, Air Conditioning & Refrigeration News.

EQUIPMENT FOR SALE

FOR SALE: 8-Bush finned coils (new) 18" wide—127" long. Model A26-½-120 complete with cork insulated bunkers capacity 550 B.T.U. each—Bargain. AFFILIATED REFRIGERATION SERVICE, 917 Eight Ave., N.Y.C.

MOTORS AND condensing units—available at once—⅛-¼-⅓-½ Universal condensing units with or without motors. Special—six hole ice-cream cabinets with ¼ hp. Copeland units less motors $225. Also beverage coolers, beer equipment, stainless steel reach-in freezers. ALBROD CORP., 319 West 48th St., New York City 19, CI 6-9100.

IMMEDIATE DELIVERY—new air conditioning equipment. Weathermakers complete with motor, "Freon" coil, etc. 2 ton to 25 ton. SWSI, DWDI, and twin centrifugal blowers, propeller fans, heating and cooling coils, evaporative condensers, self-contained air conditioning units, condensing units. CONTROLDTEMP CORP., 236 Butler St., Brooklyn 17, N. Y.

GAS VALVES—immediate shipment of Minneapolis-Honeywell V155A, 1" gas valves, 24 volts, 60 cycle with transformer, $24.00 each. T11A low voltage thermostats, 55 to 85 degree range, $6.50 each. T915A thermostats, $5.00 each. J. L. COONEY, 223 Walton Street, Syracuse, N. Y.

LIKE-NEW CARRIER equipment: Weathermaker type 39Q2 less motor and steam coil; evaporative condenser type 9Q6139 less pump, with unit fan type 27R6 less motor; finned type steam coils—one double row 66" x 24" x 9"; three triple row 84" x 32" x 17". Will consider offers for entire lot or will sell separately. CORRELL'S, Linton, Indiana.

FOR SALE—AC motors ½ to 3 hp. single and 3 phase, list price. Immediate delivery. EDISON COOLING CORP., 310 E. 149th St., Bronx 51, N. Y.

SACRIFICE OVERSTOCKED inventory of new condensing units, compressors, motors, and self-contained air conditioners. Sizes from 1½ HP to 50 HP, includes Carrier, Universal, Trane, etc. Wire for prices. E. M. FAIRBANKS CO., 145-03 7th Avenue, Whitestone, L.I., N.Y.

REFRIGERATOR DOORS, Jamison standard infitting double gasket, 3 hinges, latch, frame and sill, 6 inch cork insulation, opening 6' x 2' 6", also dual batten vestibule doors attached. All doors metal clad. $65.00 per set, E. M. FAIRBANKS CO., 145-03 7th Ave., Whitestone, L.I., N.Y.

QUALITY BOBTAIL fountains; reach-ins. walk-in boxes—wood, metal; dough retarders; double duty cases—stainless steel porcelain; dairy, florist, bakery cases; ice cream hardening cabinets; thermopane frozen food cases; milk, sandwich coolers; stainless steel back bars; with machines. Equipment made to special order. FRIGITEMP CORP., 931 Bergen St., Brooklyn 16. MA 2-9093.

PANELECTRIC AUTOMATIC ice cube makers, automatic models—freezes 1800 cubes per day. HAAS SALES & SERVICE, 203 Butler St., Pittsburgh 23, Pa.

4—2 HP COPELAND condensing units complete with motor model 200 AFL in original factory crates $270.00. FOB Todelo, Ohio. H & J EQUIPMENT CO., 1945 Canton St., Toledo 2, Ohio.

1 HP MEAT AND bone cutter machines. Popular make complete with single phase motors. Brand new in original factory crates. Immediate delivery. HARRIS COMMERCIAL REFRIGERATION CO., 123 North Perry St., Attica, Ind.

NEW NORGE H.H. refrigerator evaporators. Norge washing machine parts—list your needs. HART SALES, INC., 162 Atlantic Avenue, Lynbrook, N. Y.

½ HP AIR COOLED condensers, condensing unit bases, ¼ & ⅓ HP air cooled condensing units. Motors: ½—¾—1 HP. 110-220-V. 60 cycle, single phase A.C. Immediate delivery. KELMORE SERVICE, INC., 599 Springfield Avenue, Newark 3, New Jersey.

½ HP CONDENSING units—air cooled, complete with motor and control. Available immediately. Price—$140.00 less motor and control—$95.00. 25% deposit required with order. Balance SDBL or COD. FOB Columbus, Ohio. KOLD DRAFT COLUMBUS, INC., 334 Marconi Blvd., Columbus 15, Ohio. Main 1583 and Main 3422.

NEW MOTORS, heavy duty repulsion induction, single phase, 110-220 volts, 60 cycle, available immediately. ½ HP—$40.00, ¾ HP—$53.00, 1 HP—$60.00, 1½ HP—$72.00. 25% deposit required with order. Balance SDBL or COD. KOLD DRAFT COLUMBUS, INC., 334 Marconi Blvd., Columbus 15, Ohio. Main 1583 and Main 3422.

1000 MOTORS. FOR sale, from stock ⅝ hp.—3425 RPM—3 ph/230 V. (Underrated—easily equal to ¾ hp.) Ballbearing, for vertical or horizontal. Enclosed Fr. ¾ in. shaft. $36 each. This rugged motor cannot burn out. (Glass insulated wire coils.) MODERN SUPPLY CO., 206 Fulton St., New York 7—CO 7-0100.

NEW FRICK "Freon" condensing units, 3 phase, 60 cycle, 220 volt, water cooled. 3 HP @ $375.00; 5 HP @ $595.00. F.O.B. Charleston, W. Va. Quantity limited. If interested answer immediately. MOUNTAIN STATE DISTRIBUTORS, INC., 830 Pennsylvania Ave., Charleston 2, W. Va.

FOR SALE—15" x 15' "Freon" 12 shell & tube condenser, approximately 80 tons capacity, 12" x 8' receiver, 12' x 24' x 12' Red Wood cooling tower with C.I. posts, 15 HP water circulating pump. Immediate shipment. OKLAHOMA REFRIGERATING CO., Oklahoma City 3, Oklahoma.

BLOWER COILS—new, forced convection, Drayer-Hansen coils, suitable in installations in walk-in coolers, in sizes ranging from 4,000 to 15,000 BTU, at 15 to 20 Deg. temperature differential. Attractive price and immediate delivery while they last. Act now! REFRIGERATION ENGINEERING CORP., 2024 Market Street, Philadelphia 3, Pa.

SECTIONAL WALK-IN coolers, kiln dried fir front, spruce interior. Chrome hardware, metal saddle, finished shellac 4 in. Fiber $1.20 for freezers 6 in. Fiber $1.40 per sq. ft. Cork insulation prices on request. Limited number new refrigeration units coils, etc. available. Send us your requirements. REFRIGERATION SPECIALTIES, INC., 721 Flushing Ave., Brooklyn 6, N. Y.

FLOAT REPLACEMENTS. For replacing defective high side floats on all household units. Regular charging connection, capillary tube setup, internal strainer and exact mounting plate. Part #2000-Westinghouse (4 hole plate), and #2010 (3 hole plate): Part #2020-Gibson Part #2030-General Electric (DR-1 & DR-2). Part #2040-For general replacement (undrilled plate). $6.75 each. SEALED UNIT PARTS CO., 3097 Third Ave., New York 56.

SEALED CROSLEY TERMINALS. Installed from the outside in a few minutes without opening the compressor. Corrects leaky terminals on all Crosley "F-12" units. Set of three $6.75 (Part No. 1020). Installation tool $1.65. Immediate delivery. Money-back guarantee. SEALED UNIT PARTS CO., 3097 Third Ave., New York 56, N. Y.

ATTENTION JOBBERS: Replacement pistons for Crosleys. The only available supply in the middle west. In standard and oversizes. Dealers and servicemen: complete condensing units, ¼s and ⅓s—brand new. SQUARE DEAL SUPPLY CO., 904 N. Illinois, Indianapolis 4, Indiana.

FOR SALE—cold storage doors—all sizes reachin and walkin doors, track doors, vestibule doors, super freezer doors, refrigerator fronts with hinged doors or windows, can and crate passing doors. Excellent deliveries and materials. Write for prices. STREATOR PRODUCTS CORPORATION, Fairfield, Iowa.

FAN BLADES—immediate delivery—Torrington B series, size 24"—30"—36"—48"—40 pitch, unpainted ¾" bore, all new in original containers. VALLEY FAN MFG. CO., Box 206, Fort Valley, Ga.

UNDER BAR type beverage coolers manufactured by General Refrigerators Corporation, NYC, eight foot length thirty case capacity, stainless steel sliding covers, black crackle finish, complete with coil and blower. Regular dealers price $265.00. Special now $165.00 FOB Los Angeles. Compressors also available. WEST PICO APPLIANCE CO., 5812 West Pico Blvd., Los Angeles 35, Calif.

ONE WESTINGHOUSE CLS2550 75 HP compressor with 50% capacity reduction and CWC-120 water cooled condenser and LC3400 water chiller. $7,579.00. F.O.B. Wichita Falls plus back freight. New equipment in original crates. BOX 2348, Air Conditioning & Refrigeration News.

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LOW COST automatic fire extinguisher. Exclusive county rights available for the Marvel automatic Kill-Fyr extinguisher. Component parts approved. Easy sales, good profits. Write for descriptive circular and facts from satisfied users. KILL-FYR MANUFACTURING CO., Dept. R-88, Camden, N. J.

BUSINESS OPPORTUNITIES

WELL ESTABLISHED shop, ideal location in center of Albuquerque, New Mexico. Excellent opportunity to enjoy this healthful climate and moderate temperatures servicing New Mexico's largest city with year-around business. Complete with shop equipment and service car —$3,000.00. Contact WESTERN REFRIGERATION COMPANY, Mr. Kirby, Box 117, Albuquerque, New Mexico, 'phone 6174.

FOR SALE: Commercial and domestic sales and service near Los Angeles, City of $15,000—no competition—good franchises, consistent earning record. Good building in excellent location with good lease. Stock and fixtures $17,500.00. Reason for selling—other interests. BOX 2332, Air Conditioning & Refrigeration News.

FOR SALE—Going refrigeration and sales business in Southern California. Established over 10 years. Annual gross, $150,000. Sale includes 3 late-model service trucks, fully-equipped shop, electrical motor rewinding facilities, 2-line telephone, valuable franchises for commercial equipment sales, lease. Advertising in effect. $25,000, plus inventory. Address BOX 2340, Air Conditioning & Refrigeration News.

FOR SALE: Commercial refrigeration sales and service business, including refrigeration equipment franchise. Located in central Michigan. Has been established for fourteen years. BOX 2343, Air Conditioning & Refrigeration News.

COMMERCIAL & domestic refrigeration sales & service business including electrical appliance store. Valuable franchises. Excellent location in rich farming community. City of 15,000 population in Wisconsin. Good help, low rent, late model truck. Inventory, franchises, good will. Inventory can be financed. BOX 2345, Air Conditioning & Refrigeration News.

SPLENDID OPPORTUNITY for energetic young man to get into the refrigeration, air conditioning, heating business cheap. Nationally known lines, all first quality. Just invoice stock. Little competition. Other business takes up most of our time. BOX 2346, Air Conditioning & Refrigeration News.

Studying Installation and Servicing

There are still a lot of veterans learning the refrigeration installation and service trade. This is a picture of the class in the subject opened this year by Michigan School of Trades. Majority of students are veterans.

* * *

Erio Leads Contractors Group at Springfield

SPRINGFIELD, Ill.—Pete J. Erio, of Erio Sales & Engineering Co., was recently elected president of the newly organized Refrigeration Contractors Association of Springfield.

Other officers include Stuart W. Robinson, of Henson-Robinson Co., vice president, and William H. Crook, of Zero Locker & Refrigeration Co., secretary-treasurer.

The association is affiliated with the National Association of Refrigeration Contractors.

Trade School Enrollment Reflects Wide Interest Of Veterans In Field

DETROIT—That veterans are still looking to the refrigeration service and installation field as one of their "best bets" for a life career is indicated by the enrollment in the Michigan School of Trades course in refrigeration, first offered earlier this year.

The vast majority of students in the course on refrigeration installation, service, and maintenance offered by this accredited school, are veterans.

The course offered provides 650 hours of training, of which 40% is theory, and 60% practice. The theory is offered in text material, lectures, charts, and motion pictures.

For shop practice various types of household and refrigeration equipment is supplied, and students perform the various operations.

In recommending graduates for work in the field, James J. Halley, director of the school, reports that only the top third, will be considered for recommendation.

Minneapolis-Honeywell Reaches Volume Output On New Air Register

MINNEAPOLIS — Minneapolis-Honeywell Regulator Co.'s new air conditioning register now is in volume production, L. J. Krause, sales manager of the company's register division, announced recently.

Developed during the war years, several hundred thousand of the new registers will be made during the current year.

Self-contained volume dampers accurately meter the air with an adjustable lever at the register itself, Mr. Krause said. Thus balancing of the heating system becomes a one-man job. When air velocities are under 800 feet per minute, branch quadrants can be eliminated, thus saving cost and inconvenience.

Designed to give 90-degree, air-steam angularity, the fixed angle turning vanes of the register eliminates air turbulence and spread the air stream evenly over the register face, Mr. Krause stated.

Koldaire Refrigeration Occupies Larger Quarters

BROOKLYN—Koldaire Refrigeration Co., a commercial refrigeration equipment firm, has recently occupied its new quarters at 1985 Nostrand Ave. here, M. S. Shore of the company has announced.

In readying the building, Koldaire added 2,800 sq. ft. of showroom and storage space to the structure, Mr. Shore said.

Koldaire has been in business for more than 11 years and maintains one of the largest commercial service organizations in metropolitan New York, he declared.

Koldaire is factory representative for Curtis Refrigeration & Air Conditioning Co. for the Brooklyn and Queens area, according to Mr. Shore.

P.V. Sprout, L.W. Curl Head 2 Reopened Frigidaire Sales Corp. Branches

DAYTON, Ohio—Closed during the war, the Albany (N. Y.) and Birmingham (Ala.) branches of Frigidaire Sales Corp. were recently reopened in line with Frigidaire's current nation-wide expansion program.

R. H. Huston, eastern regional manager, announced the appointment of Paul V. Sprout, national service manager for Frigidaire for the past six years, as manager of the Albany branch. Mr. Sprout has since named Paul L. Preston, former district sales representative for the Albany territory, as general sales manager.

L. W. Curl, manager of the Birmingham branch at the time it was discontinued, has been reappointed to that post, according to F. M. Davison, southeastern regional manager. Prior to his new assignment, Mr. Curl was branch manager at Baltimore and, more recently, in charge of activities in the Birmingham territory preparatory to reestablishment of the branch.

Both Mr. Sprout and Mr .Curl have been associated with Frigidaire for approximately 20 years.

Refrigeration Engineering Shows Warehouse System At New Phila. Offices

PHILADELPHIA — Refrigeration Engineering Corp., manufacturer and distributor of various types of ice making equipment, has announced the opening of new sales display rooms and general offices at 2024 Market St. here.

Warehousing activities continue to be centered in Camden, N. J. Coolers are manufactured at Huntington and Camden, the company said.

A complete refrigerated warehouse with packaged refrigeration system will be on demonstration at the display rooms, according to the company.

Products manufactured by the firm include small bulk ice makers, large commercial ice plants, prefabricated refrigerated warehouses for low and medium temperatures, packaged refrigeration systems, automatic defrost devices, cold storage plant equipment, and commercial fixtures of all types.

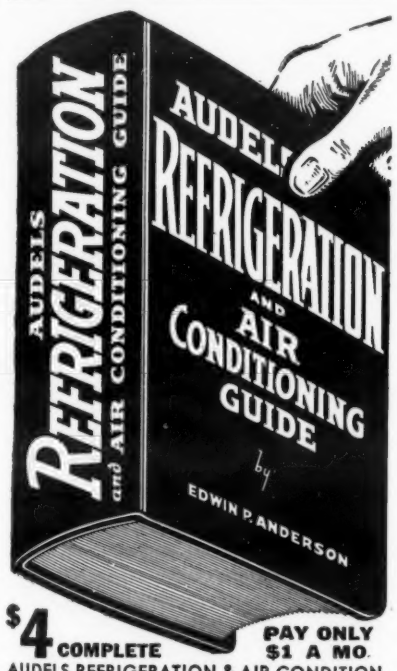
At Allied Supply Co. 'Grand Opening'

Allied Supply Co., refrigeration parts and equipment wholesaler in Dayton headed by John Homan, was host to many guests at the grand opening of its new and enlarged quarters last month. The new quarters are distinguished by special shelving and other display arrangements. Left to right, front row, are: J. W. VanDegrift, Lilliam Rondebush, John Kaufman, Irene Foret, John Homan, Verne Kautt, and Herman Tschiegg. Back row: Bill Homan, Dan Shively, Robert Huels, Robert Warner, Walter Pooch, William Wells, Jack Homan, Arnold Iams, Charles Neeson.

Toledo RSES Holds 'Annual Fish Fry'

An "Annual Fish Fry" is one of the main events of the year for the Greater Toledo Chapter of the Refrigeration Service Engineers Society. Taking part in the 1947 event held recently were, left to right: Emmett Gresham and Dean Mohr, Heat & Power Engineering Co.; Mark Dennis, RSES treasurer; William Foster, president; Harold Dille, secretary; Taylor Benington, chairman, entertainment committee.

Pictures by Austin Jones, Kerotest Mfg. Co.



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Hand-Painted 'Tie-In'

Ellsworth Whipps, representative in the Detroit area for Ranco, Inc., manufacturer of refrigeration controls, is shown wearing a hand-painted "tie-in" for his company's products—various models in the company's line depicted on his neckwear.

'Red Flag' System of Material Control Aids Carrier's Production

NEW YORK CITY—A "red flag" system which warns of impending parts shortages has enabled Carrier Corp. to attain 96% of output goals set a full year in advance, according to Walter A. Sharritts, who is production control manager of the concern.

In explaining how Carrier has been able to reduce manufacturing costs through improved control of production and purchasing, Mr. Sharritts recently told the American Management Association that the "red flag" system completely eliminates the dangers of unbalanced inventories developing.

Warnings of approaching shortages of purchased parts, he elaborated, are indicated from the stockrooms in the same way as manufactured parts. Then lists are sent to the expediting department of the purchasing division 15 days ahead of the production deadline.

These lists serve as "red flags" to denote that the lines in question are to be concentrated on immediately.

Mr. Sharritts pointed out that under the Carrier control system, two new types of information are compiled: accurate estimates of purchasing time and lead time. He defined purchasing time as the time it takes to buy raw materials from the approval of the need to the time of delivery to the factory and lead time as the time it takes to make parts in the factory.

Estimates must be worked out very accurately during shortages of materials to prevent production inefficiency, Mr. Sharritts stressed.

It was emphasized that pre-planning marketing and pre-planning production are the essential elements of Carrier's methods.

In another talk to the association, C. W. Kennedy, quality control engineer for Federal Products Corp., said 100% inspection activities in factories can be reduced by as much as 66% or often entirely eliminated if "quality control" methods are properly applied.

Mr. Kennedy further declared that a chart system adequately installed automatically increases production about 10% without exception. He said this is because the charts act as operating "maps" for machine operators.

McCabe Wins Promotion At Times Appliance

NEW YORK CITY—Times Appliance Co., Inc., Westinghouse distributor here, has recently announced the appointment of Peter J. McCabe as assistant to Arthur J. Callahan, vice president and general sales manager of the firm. He was formerly sales manager of the company's Westinghouse refrigerator division.

Other appointments announced at the same time were Milton E. Haas, manager of refrigerated sales, and Bert J. Hardesty, who is manager of housewares and traffic appliance sales.

Refrigeration Tax Up $1 Million In March

WASHINGTON, D. C.—A report by the Bureau of Internal Revenue shows that receipts from manufacturers' excise taxes for March on refrigerators, air conditioners, and like commodities increased $956,063 over the comparable 1946 period.

March taxes totaled $2,538,106, as compared with $1,582,043 for the same month last year, according to the report.

Collections on electric, gas, and oil appliances amounted to $5,839,886. The figure for March, 1946, was $2,838,149.

The Bureau said all receipts on durable goods were considerably higher than those for March last year.

Harrison Is Goodrich Refrigerator Buyer

AKRON, Ohio—W. S. Harrison has been named buyer-merchandiser of refrigerators, freezers, and traffic appliances for the Auto and Home Supplies department of The B. F. Goodrich Co., reports C. T. Morledge, department manager.

Mr. Harrison had been previously buyer-merchandiser in electronics, and is succeeded in that post by Frank C. Tobin.

Appliance Shop Building Okayed

LOS ANGELES — The Office of Housing Expediter, Division of Nonresidential Construction, has approved construction of a shop building at 2828 Newell St., Los Angeles, for the Electrical Appliance Service Corp. of that address, to cost $8,282.

RSES Names Members Of Examining Board

CHICAGO — Appointments to the international educational and examining board of the Refrigeration Service Engineers Society were announced recently by W. W. Allison, Society president.

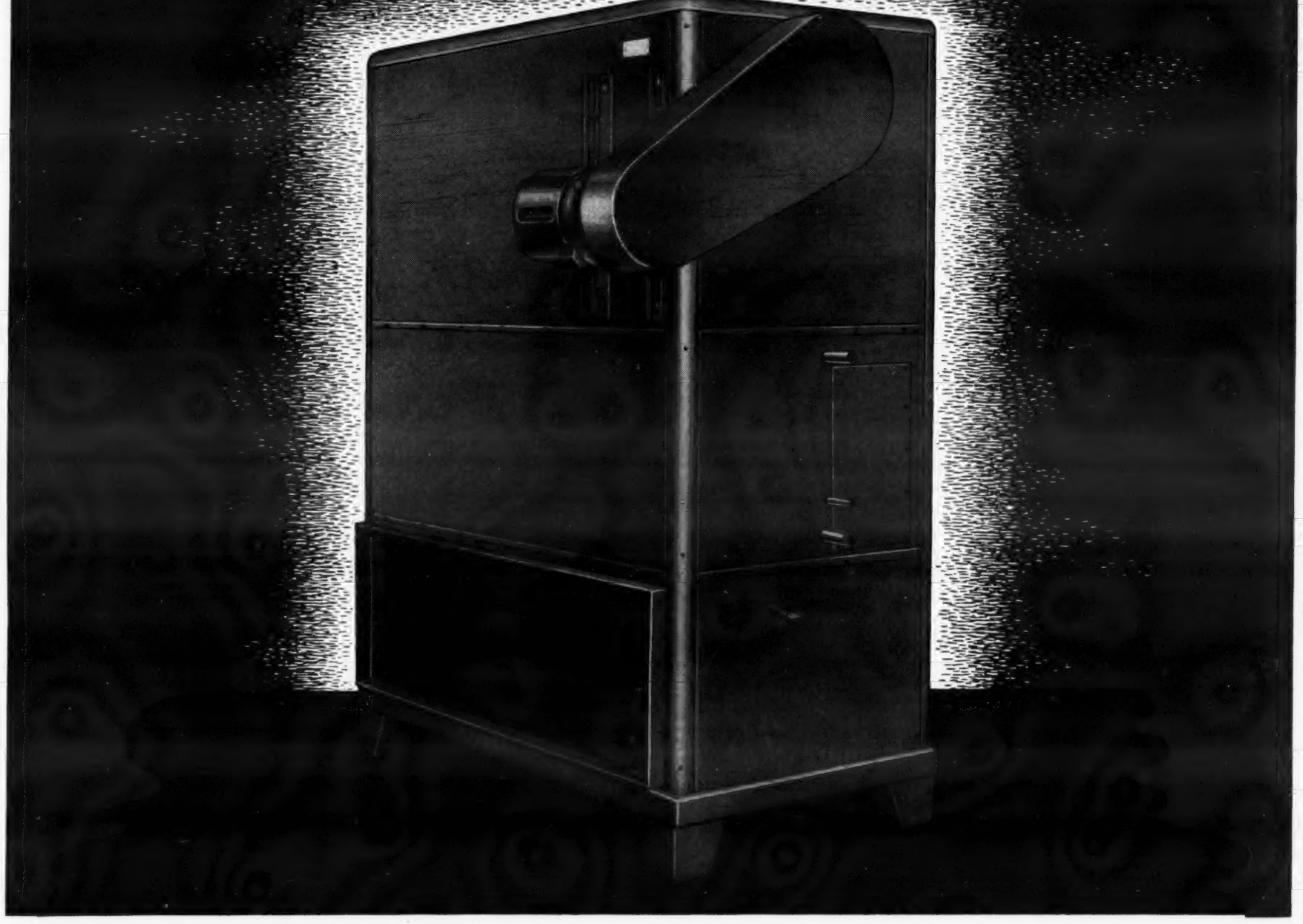
Paul B. Reed, chairman of the board, will be assisted by the following seven members:

Harry D. Busby, managing editor of *The Refrigeration Service Engineer;* J. L. Rosenmiller, manager of the accessory equipment and maintenance department of York Corp.; Albert F. Sawyer, engineer for Dole Refrigerating Co.; A. M. Schmitz, manager of the northeast district for the electric refrigeration division, Servel, Inc.; J. H. Spence, service manager of Hussmann Refrigeration, Inc.; Dr. Walter O. Walker, director of research and development for the Ansul Chemical Co.; and A. M. Fenwick, educational director of the Buckeye State Association.

St. Louis Surplus Sale Has Refrigeration Items

ST. LOUIS—A variety of refrigeration and air conditioning equipment is now being sold by the local regional office of the War Assets Administration in a sale ending May 15.

Items listed for disposal include ice cream refrigerators, ice chests, reach-in ice boxes, electric water coolers, air conditioning units, mechanical refrigerators, heat exchangers, rivet coolers, and exhaust fans.



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